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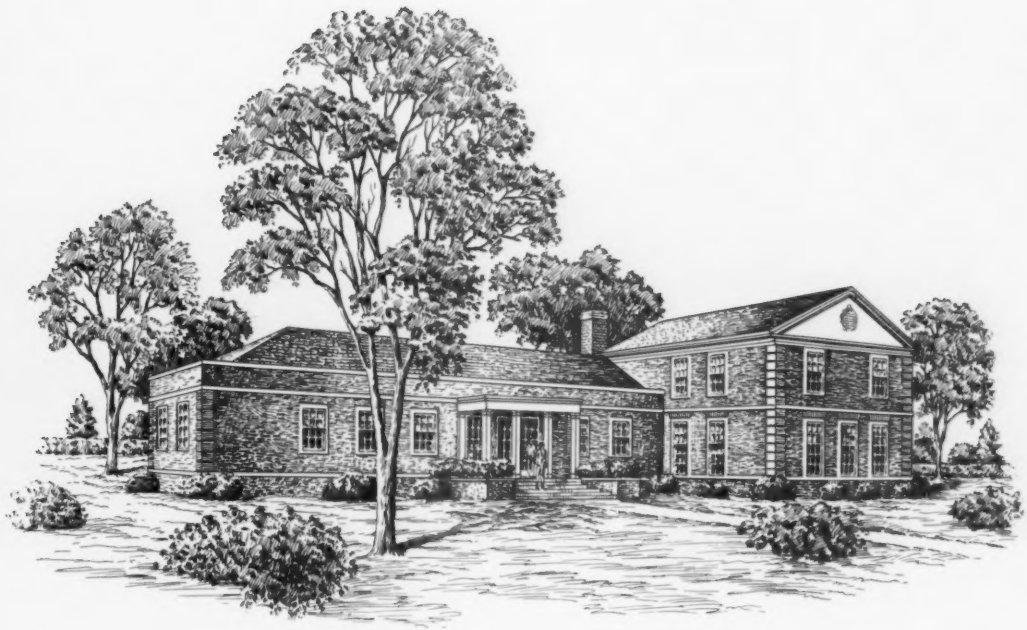
VIRGINIA MEDICAL MONTHLY



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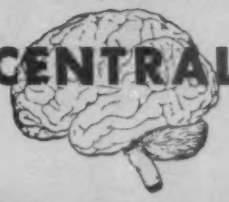

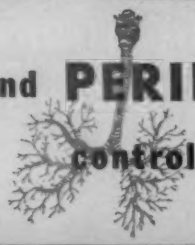

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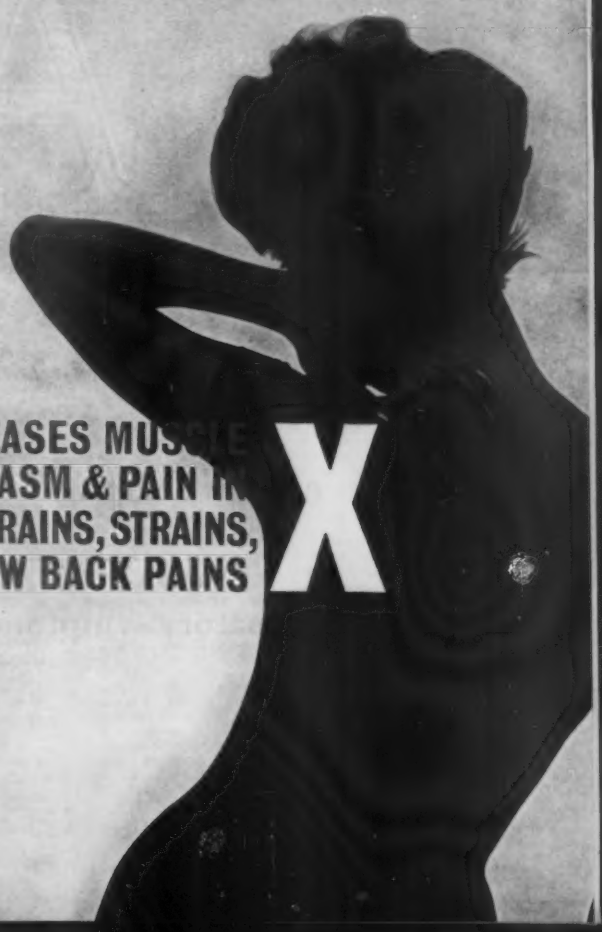

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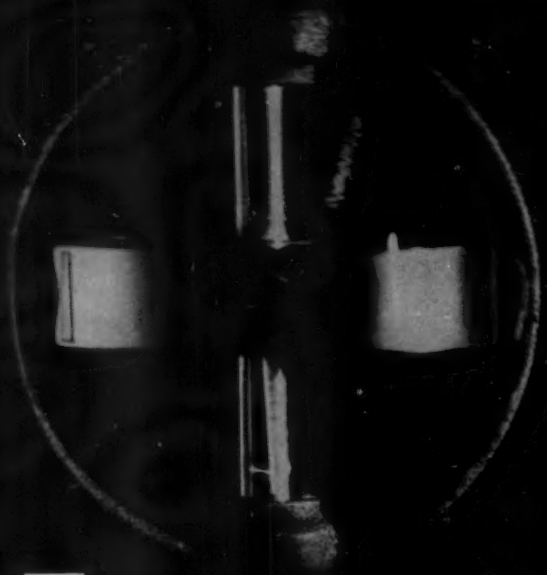

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References: 1. Feinberg, S.M., Feinberg, A.R., and Fisherman, E.W.: *J.A.M.A.* 167:58 (May 3) 1958. 2. Epstein, J.I. and Sherwood, H.: *Connecticut Med.* 22:822 (Dec.) 1958. 3. Friedlaender, S. and Friedlaender, A.S.: *Antibiotic Med. & Clin. Ther.* 5:315 (May) 1958. 4. Segal, M.S. and Duvenci, J.: *Bull. Tufts North East M. Center* 4:71 (April-June) 1958. 5. Segal, M.S.: Report to the A.M.A. Council on Drugs, *J.A.M.A.* 169:1063 (March 7) 1958. 6. Sherwood, H. and Cooke, R.A.: *J. Allergy* 28:97 (Mar.) 1958. 7. Duke, C.J. and Oviedo, R.: *Antibiotic Med. & Clin. Ther.* 5:710 (Dec.) 1958. 8. McGavack, T.H.: *Clin. Med.* (June) 1958. 9. Freyberg, R.H.; Berntsen, C.A., and Hellman, L.: *Arthritis and Rheumatism* 1:215 (June) 1958. 10. Hartung, E.F.: *J.A.M.A.* 167:973 (June 21) 1958. 11. Hartung, E.F.: *J. Florida Acad. Gen. Pract.* 8:18, 1958. 12. Zuckner, J.; Ramsey, R.H.; Caciolo, C., and Gantner, G.E.: *Ann. Rheum. Dis.* 17:398 (Dec.) 1958. 13. Appel, B.; Tye, M.J., and Leibsohn, E.: *Antibiotic Med. & Clin. Ther.* 5:716 (Dec.) 1958. 14. Kalz, F.: *Canad. M.A.J.* 79:400 (Sept.) 1958. 15. Mullins, J.F., and Wilson, C.J.: *Texas State J. Med.* 54:648 (Sept.) 1958. 16. Shelley, W.B.; Harun, J.S., and Pillsbury, D.M.: *J.A.M.A.* 167:959 (June 21) 1958. 17. DuBois, E.F.: *J.A.M.A.* 167:1590 (July 26) 1958. 18. McGavack, T.H.; Kao, K.T.; Leake, D.A.; Bauer, H.G., and Berger, H.E.: *Am. J. Med. Sc.* 236:720 (Dec.) 1958. 19. Council on Drugs: *J.A.M.A.* 169:257 (Jan. 17) 1959. 20. Rein, C.R.; Fleischmajer, R., and Rosenthal, A.R.: *J.A.M.A.* 165:1821 (Dec. 7) 1957.

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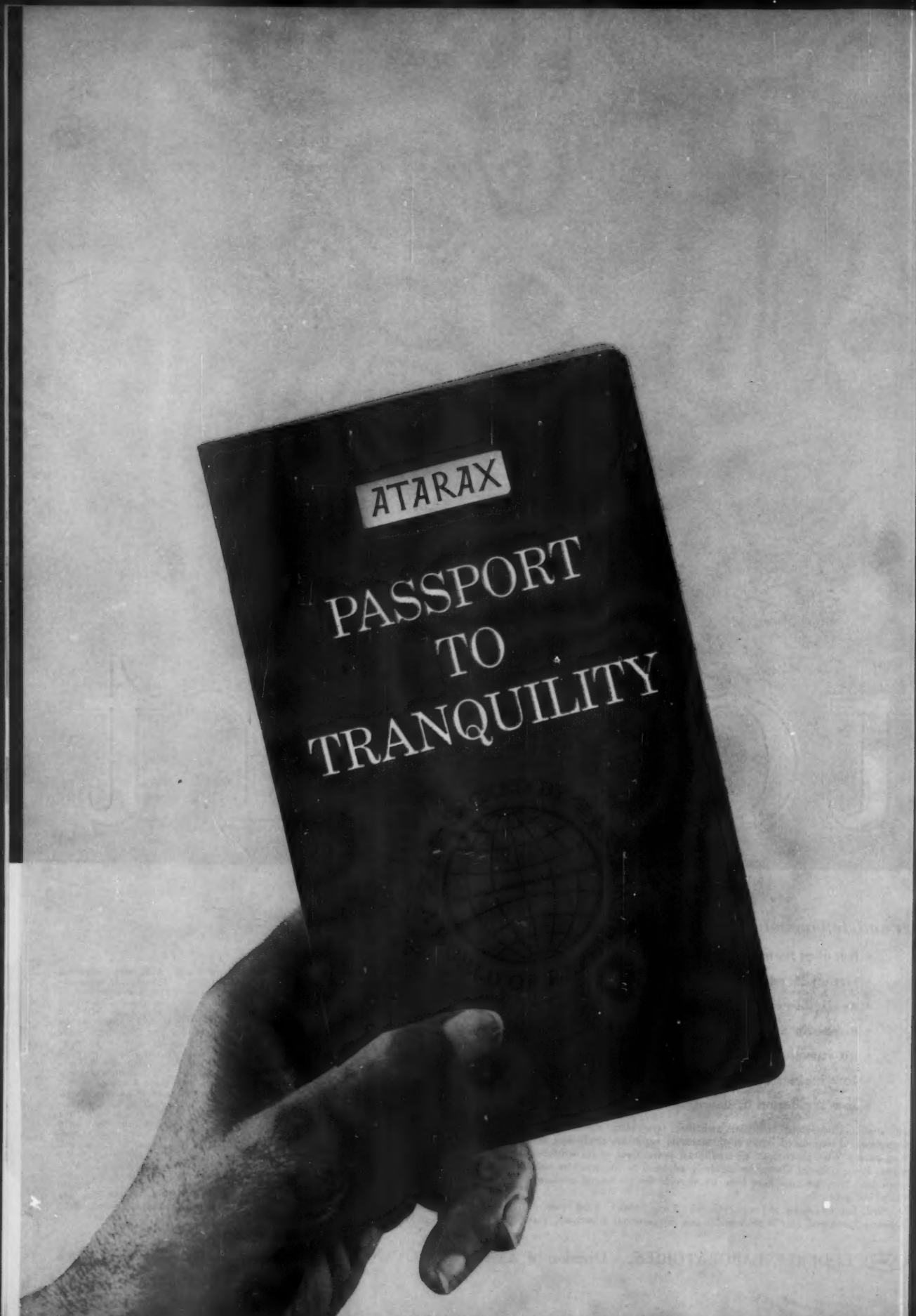
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References: 1. Farah, L.: Internat. Rec. Med. *169*:379 (June) 1956. 2. Smigel, J. O., et al.: J. Am. Geriatrics Soc. *7*:61 (Jan.) 1959. 3. Feinberg, A. R., et al.: J. Allergy *29*:358 (July) 1958. 4. Eisenberg, B. C.: J.A.M.A. *169*:14 (Jan. 3) 1959. 5. Maryssael, L.: Bruxelles-méd. *38*:141 (Jan. 26) 1958. 6. Pfleger, R.: Med. Klin. *53*:1030 (June 5) 1958. 7. Over 200 laboratory and clinical papers from 14 countries.

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*Thompson, R. E., and Hecht, R. A.: Am. J. Clin. Nutrition 7:311-317 (May-June) 1959.

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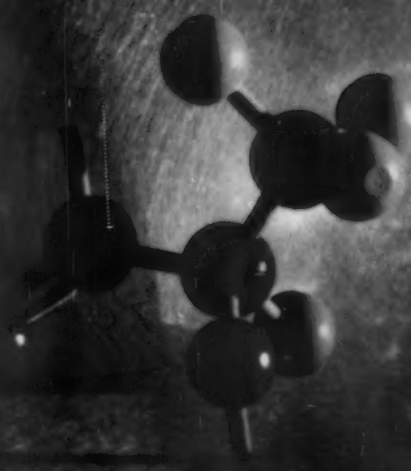

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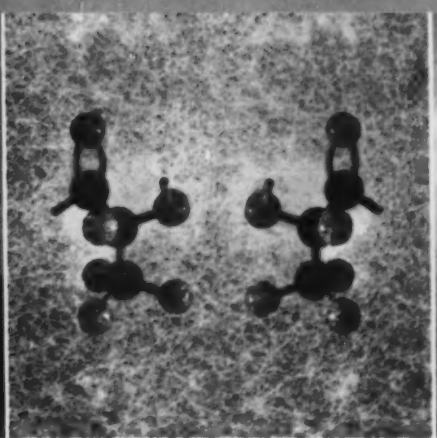

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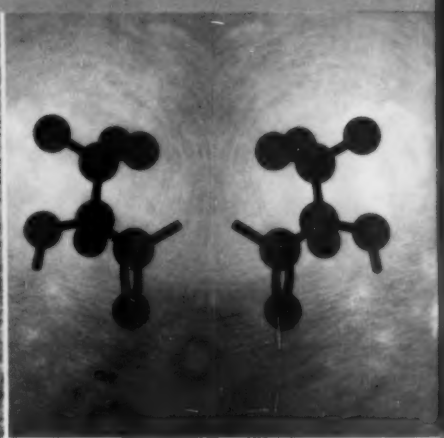

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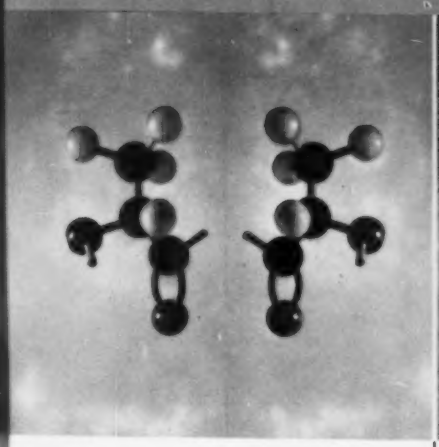
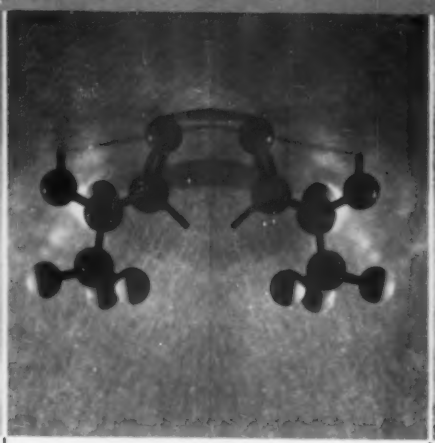
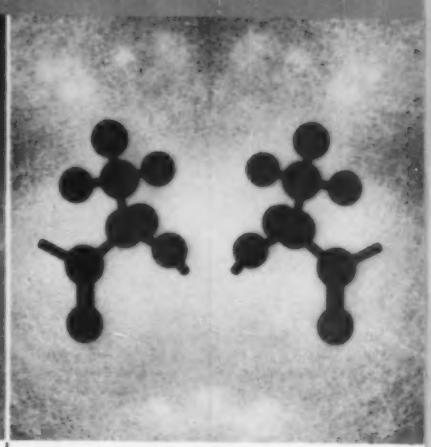






ANTIBIOTIC ACTIVITY DIRECTLY PROPORTIONAL TO ORAL DOSE

REDUCED HAZARD OF SERIOUS ALLERGENICITY BY SAFER ORAL ROUTE

MANY STAPH STRAINS MORE SENSITIVE TO SYNCILLIN

BRISTOL

ORIGIN OF A NEW SYNTHETIC PENICILLIN

In March, 1957, Dr. John C. Sheehan of the Massachusetts Institute of Technology announced the total synthesis of penicillin from common raw materials, thus solving a problem which had baffled research workers for more than 15 years. Although total synthesis was not commercially practicable, this work, sponsored by Bristol Laboratories, made possible the subsequent synthesis of new penicillins not occurring in nature. Later scientists at Beecham Laboratories in England discovered that a key intermediate (6-aminopenicillanic acid) could be produced by a fermentation process. With these achievements, large scale production of synthetic penicillins became feasible.

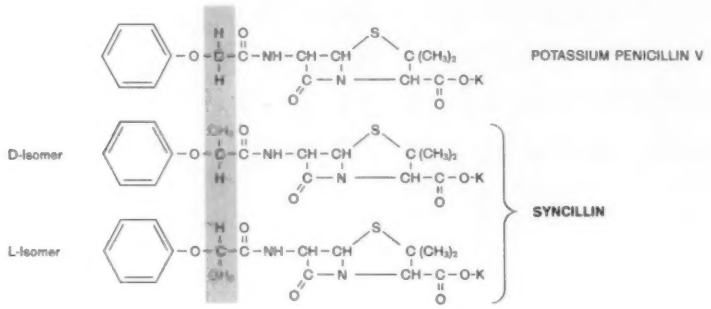
Organic chemists at Bristol then embarked upon an intensive program to develop better penicillins. Over five hundred were synthesized and underwent preliminary screening. Forty-six showed sufficient promise to warrant further investigation. Extensive microbiological, pharmacological, and clinical screening indicated that one compound, SYNCILLIN, had advantages of major importance over other penicillins.

SYNCILLIN is the N-acylation product of 6-aminopenicillanic acid and α-phenoxypropionic acid (the phenylether of lactic acid). It is freely soluble in water and remarkably resistant to decomposition by acid. The acid stability of SYNCILLIN is equivalent to that of penicillin V at pH 2 and pH 3 at 37° C.[1]

SIGNIFICANCE OF MOLECULAR ASYMMETRY AND ISOMERIC COMPLEMENTARITY

SYNCILLIN has a molecular configuration similar to penicillin V, but contains an additional CH_3 group so positioned as to render the adjacent carbon atom asymmetric. (In the formulae below, the added CH_3 group is shown in blue and the asymmetric carbon atom in red.) As a result, SYNCILLIN occurs as a mixture of two isomers.

Each isomer has been synthesized in essentially pure form and found to possess distinctive chemical and biological properties. The L-isomer is 2 to 17 times more active than the D-isomer against many of the organisms tested. As produced, SYNCILLIN is a mixture of the L-isomer and the D-isomer. As will be shown later, the antibiotic effect of the clinically available mixture, SYNCILLIN, is greater than either isomer alone against many organisms. This phenomenon is referred to here as *isomeric complementarity*.



SYNCILLIN

major therapeutic advantages accompany molecular asymmetry

ISOMERIC COMPLEMENTARITY DEMONSTRATED IN VITRO

The *in vitro* minimum inhibitory concentration (MIC) of SYNCILLIN and of each of its two component isomers was determined for a variety of common pathogens and laboratory test organisms. As may be seen from Table 1, all three are highly effective against penicillin-susceptible staphylococci and against pneumococci, streptococci, gonococci, and corynebacteria; all are ineffective against Salmonella, *E. coli*, and other gram-negative coliform bacilli.

SYNCILLIN was more active against many of the test strains including some streptococci and staphylococci than either of its components. This demonstrates *in vitro* the phenomenon of isomeric complementarity.

TABLE 1

Minimum Concentrations of SYNCILLIN and Components Required to Inhibit a Wide Range of Bacteria

Minimum Inhibitory Concentration (MIC) in Micrograms per Milliliter

	L-Isomer	D-Isomer	SYNCILLIN
Bacillus anthracis	0.06	[illegible]	[illegible]
Bacillus cereus	12.5	[illegible]	[illegible]
Bacillus circulans ATCC 9961	6.25	[illegible]	[illegible]
Corynebacterium xerosis	0.06	[illegible]	[illegible]
*Diplococcus pneumoniae	0.06	[illegible]	[illegible]
Escherichia coli ATCC 8739	>100	[illegible]	[illegible]
Gaffkya tetragena	0.015	[illegible]	[illegible]
Micrococcus flavus	0.015	[illegible]	[illegible]
Salmonella paratyphi A	25	[illegible]	[illegible]
Salmonella typhosa	>100	>100	[illegible]
Sarcina lutea ATCC 10054	0.007	[illegible]	[illegible]
Shigella sonnei	100	100	[illegible]
Staphylococcus aureus 209P	0.06	0.125	[illegible]
Staphylococcus aureus var. Smith	0.03	[illegible]	[illegible]
Streptococcus agalactiae ATCC 1077	[illegible]	[illegible]	[illegible]
Streptococcus dysgalactiae ATCC 9926	0.03	[illegible]	[illegible]
Streptococcus faecalis PCI 1305	6.25	[illegible]	[illegible]
*Streptococcus pyogenes 203	0.06	[illegible]	[illegible]
*Streptococcus pyogenes Digonnet	0.03	[illegible]	[illegible]
Streptococcus pyogenes 2320	0.06	[illegible]	[illegible]
Streptococcus pyogenes 23586	0.06	[illegible]	[illegible]
Vibrio comma	[illegible]	[illegible]	[illegible]

Serial dilution technique in heart infusion broth   *10% serum added

SYNCILLIN

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ISOMERIC COMPLEMENTARITY CONFIRMED IN VIVO

To determine the median curative dose (CD_{50}) mice were infected with 100 times the lethal dose of *Staphylococcus aureus*. Each penicillin being tested was administered intramuscularly at the same time, and the dose required to cure half the animals determined. The greater effect of the mixture of the two isomers (SYNCILLIN) is shown in two independent experiments. (See Figure 1.) Note that isomeric complementarity is thus confirmed *in vivo*.

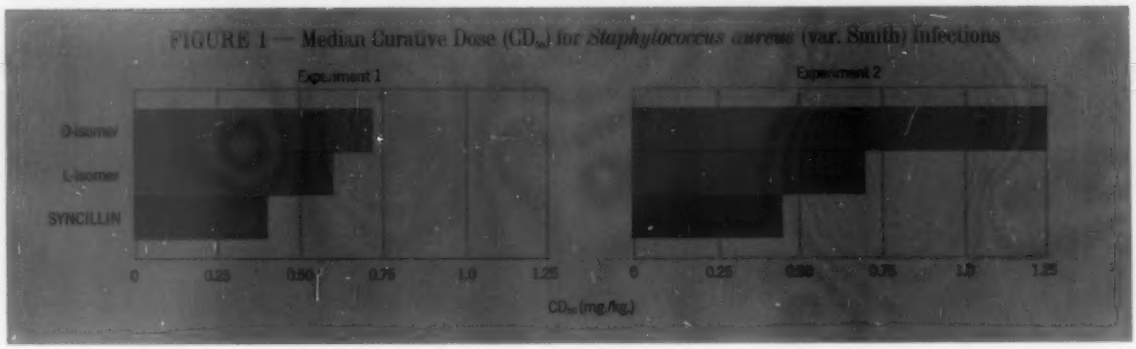


FIGURE 1 — Median Curative Dose (CD_{50}) for *Staphylococcus aureus* (var. Smith) Infections

MANY STRAINS OF STAPHYLOCOCCI MORE SENSITIVE TO SYNCILLIN

SYNCILLIN has been tested against a large number of strains of *Staphylococcus aureus* isolated from clinical sources. Many organisms resistant to potassium penicillin G and potassium penicillin V proved sensitive to SYNCILLIN.

Wright[2] performed sensitivity studies on 54 strains, the majority of which were resistant or moderately resistant to penicillin V and penicillin G. Thirty-two (60%) of the strains were sensitive to SYNCILLIN, approximately twice as many as with the other penicillins. (See Figure 2.) In two-thirds of the isolates, SYNCILLIN produced inhibition at concentrations lower than those required for either of the other antibiotics. One strain was more sensitive to penicillin G.

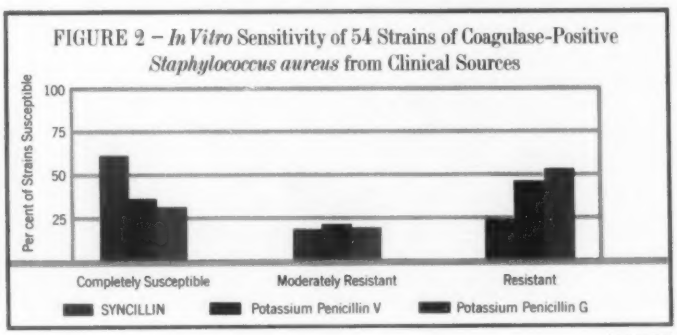


FIGURE 2 – *In Vitro* Sensitivity of 54 Strains of Coagulase-Positive *Staphylococcus aureus* from Clinical Sources

Adapted from Wright[2]

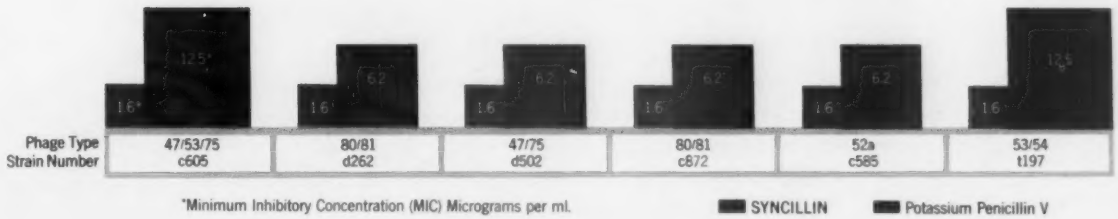
SYNCILLIN

major therapeutic advantages accompany molecular asymmetry

Of equal interest are the findings of White.[3] Six penicillin-resistant strains of staphylococci were isolated from hospital infections. None was sensitive to potassium penicillin V. All were sensitive to SYNCILLIN. (See Figure 3.)

FIGURE 3

Minimum Concentrations of SYNCILLIN Required to Inhibit
Hospital Strains of *Staphylococcus aureus* Resistant to Potassium Penicillin V

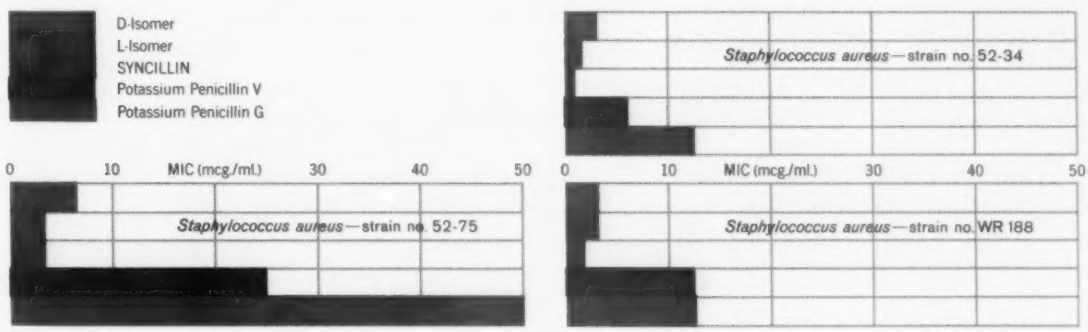


The efficacy of SYNCILLIN against the type 80/81 Staphylococcus (dangerous and widespread in hospitals) is worthy of special attention.

The complementary action of the component isomers is also seen with strains of staphylococci resistant to penicillins. Note that SYNCILLIN is more effective than either isomer against strains 52-34 and WR 188. (See Figure 4.) Against all three strains, SYNCILLIN is effective at concentrations below serum levels, while penicillins V and G are ineffective.

FIGURE 4

Minimum Inhibitory Concentrations (MIC) for Coagulase-Positive
Penicillin-Resistant Strains of *Staphylococcus aureus*



Isomeric complementarity has thus been demonstrated for:

— *certain penicillin-susceptible streptococci, staphylococci and corynebacteria* in vitro *(Table 1)*

— *penicillin-susceptible staphylococci* in vivo *(Figure 1)*

— *penicillin-resistant staphylococci* in vitro *(Figure 4)*

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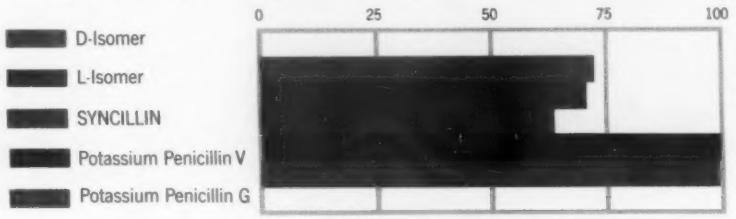
ISOMERIC COMPLEMENTARITY SHOWN BY REDUCED RATE OF INACTIVATION BY PENICILLINASE

Bacterial resistance to penicillin has been attributed to the action of penicillin-inactivating enzymes produced by the invading organisms.[4] As shown in Figure 5, SYNCILLIN is less affected by staphylococcal penicillinase than either of its component isomers – a further demonstration of isomeric complementarity. Further, SYNCILLIN is shown to be less inactivated by this enzyme than penicillin V and penicillin G.

Resistance to SYNCILLIN develops in a slow, step-wise manner characteristic of other penicillins, in contrast to the usually rapid development of resistance to streptomycin.

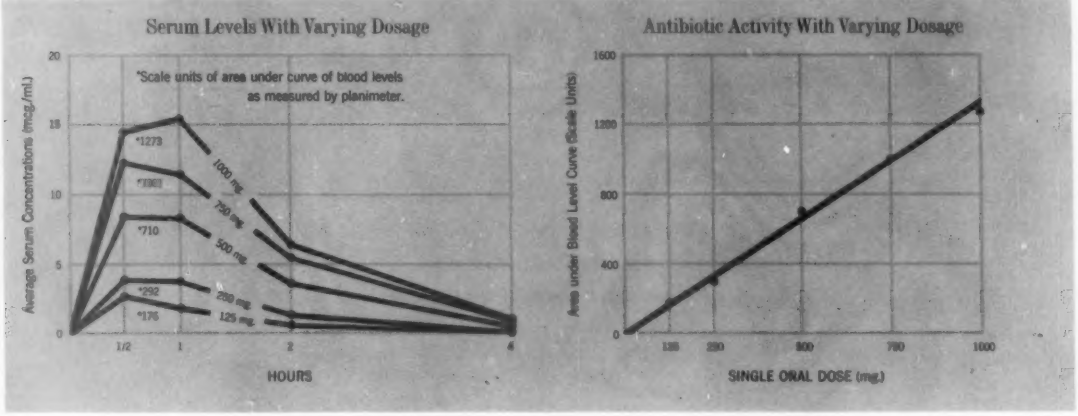
FIGURE 5—Effect of Staphylococcal Penicillinase on Different Penicillins



ANTIBIOTIC ACTIVITY DIRECTLY PROPORTIONAL TO ORAL DOSAGE

Cronk[5] studied blood levels after administering varying amounts of SYNCILLIN. (Figure 6.) Total antibiotic activity (obtained by measuring areas under curves with a planimeter) increases rapidly as the dose is doubled. These data show that increased dosage markedly increases serum concentration and thus may enhance the drug's effectiveness.

FIGURE 6



SYNCILLIN

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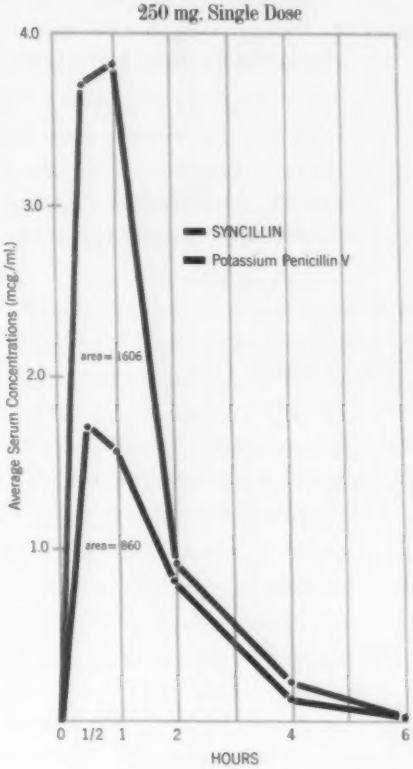
BLOOD LEVELS TWICE AS HIGH AS WITH POTASSIUM PENICILLIN V AFTER ORAL ADMINISTRATION

Wright[6] performed comparative crossover blood level studies on volunteer subjects receiving equivalent amounts of potassium penicillin V and SYNCILLIN. The peak concentrations attained during the first hour after administration were twice as high with SYNCILLIN.

The total antibiotic activity as measured by the area under the curves (see Figure 7) indicates an almost 2 to 1 superiority of SYNCILLIN (1606) over potassium penicillin V (860).

The higher blood levels may be of value with organisms of only moderate penicillin-sensitivity where doubling the blood concentration may be essential for effective bactericidal action. In addition these higher levels may be necessary where there is infection in areas with a poor blood supply.[7] Under these circumstances a higher blood concentration may provide the increased diffusion pressure required to deliver adequate amounts to the tissue.

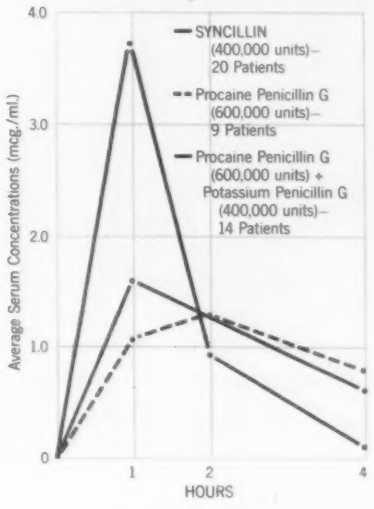
FIGURE 7
20 Subject Crossover
250 mg. Single Dose



BLOOD LEVELS MUCH HIGHER THAN WITH INTRAMUSCULAR PENICILLIN G

In addition, blood levels attained with oral SYNCILLIN[6] are much higher than those with intramuscular penicillin G.[8a,b] (See Figure 8.) Note that the level at one hour for SYNCILLIN (3.8 mcg./ml.) is more than twice as high as with procaine penicillin G, even when reinforced with potassium penicillin G (1.6 mcg./ml.). Since penicillins are *bactericidal*, these intermittent high serum levels can be clinically significant. Thus, SYNCILLIN offers the promise of superior efficacy via the safer oral route.

FIGURE 8—Serum Levels after Oral Administration of SYNCILLIN (250 mg.) and after Intramuscular Injection of Penicillin G



SYNCILLIN

major therapeutic advantages accompany molecular asymmetry

REDUCED HAZARD OF SERIOUS ALLERGENICITY BY SAFER ORAL ROUTE

SYNCILLIN has been administered in multiple doses to 437 patients and volunteers. One patient developed itching during therapy, possibly an allergic side effect. Another had a purpuric rash, but no relationship to SYNCILLIN was established. No reactions were observed in 9 patients with a known history of sensitivity to penicillin.

While the above data suggests the possibility of reduced allergenic hazard, no definite conclusions may be drawn at this time. *The usual precautions for oral penicillin therapy should be observed.* Patients with histories of asthma, hay fever, urticaria, or previous penicillin-sensitivity should especially be watched carefully. Since SYNCILLIN is administered orally, it may be expected to be safer than parenteral penicillin.

As Flippin[9] recently stated, "... it is well established that serious allergy to the drug [penicillin] is most likely to occur following parenteral administration, especially after repeated intramuscular injections; the oral route is least likely to initiate severe hypersensitivity reactions. This can be explained partly by the fact that when reactions develop following oral medication, they are usually slow enough to treat symptomatically; thus the progression of the reaction can usually be interrupted. . . . In view of the relatively high incidence of severe allergy to injectable penicillin, it would seem advisable to employ oral penicillin routinely, except in the control of infections involving the blood stream, endocardium, meninges, etc., in which cases the parenteral route remains the preferred treatment."

SYNCILLIN, like other penicillins, is essentially free of other toxicity. No hematopoietic, hepatic, or renal toxicity was observed in 210 volunteers receiving 1 gm. daily for 2 to 3 weeks.[10]

CLINICAL EFFICACY DEMONSTRATED IN PENICILLIN-SENSITIVE INFECTIONS

Clinical trials conducted by Blau and Kanof,[11] White,[12] Prigot,[13] Robinson,[14] Dube,[15] Ferguson,[16] Rutenburg,[17] Richardson,[18] Bunn,[19] Cronk,[5] Kligman,[10] and Yow [20] demonstrated the efficacy of SYNCILLIN in a variety of streptococcal, staphylococcal, pneumococcal, and gonococcal infections. Conditions treated included respiratory, skin, soft tissue, wound, and chronic urinary tract infections; acute gonorrhea; cellulitis; septicemia; otitis media; gingivitis; and Vincent's angina. In a few patients SYNCILLIN was used for rheumatic fever or gonorrheal prophylaxis.

One hundred seventy-two of one hundred ninety-six patients responded favorably to SYNCILLIN. The failures included 1 patient with pustular dermatoses, 10 elderly patients with chronic urinary tract infections, 1 patient with gonorrhea, 1 patient with a gram-negative infection, and 10 patients with staphylococcal infections. Lack of response of staphylococcal infections was attributed to the presence of resistant organisms or local suppurative foci requiring drainage.

SYNCILLIN

major therapeutic advantages accompany molecular asymmetry

Relatively few side effects were encountered. One patient experienced moderate itching of the skin which was controlled by an antihistamine. Another reported pruritus ani which did not interfere with therapy. Diarrhea occurred in 4 instances. There was one purpuric rash, but no relationship to SYNCILLIN could be established.

Clinical response usually begins within 24 hours in infections susceptible to SYNCILLIN. Recovery occurs in 4 to 7 days depending upon the severity of the infection. Gonorrheal infections respond very promptly to SYNCILLIN; 500 mg. b.i.d. for two days usually produce bacteriologic cures.

IMPROVED ANTIBIOTIC EFFECT FROM COMPLEMENTARY ACTION OF ISOMERS

SYNCILLIN is a mixture of isomers. The L-isomer is 2 to 17 times more active than the D-isomer against many of the organisms tested. Furthermore, the D- and L-isomers have other distinguishing chemical, pharmacological, and microbiological properties. Their *in vivo* and *in vitro* activities differ for many important pathogens. *Against many of the organisms tested, the combination of isomers* (SYNCILLIN) *is much more active than the stronger isomer alone.* This phenomenon of isomeric complementarity is not always demonstrable, for in a few instances SYNCILLIN is slightly less active.

Isomeric complementarity has previously been demonstrated *in vitro* (Figure 4) and *in vivo* (Figure 1). Figure 9 reveals a third form of superiority related to isomeric complementarity. Equal concentrations of SYNCILLIN and penicillin V were required to inhibit this growth of staphylococci *in vitro.* But, *in vivo,* a much smaller amount of SYNCILLIN *(one-third that of penicillin V)* was effective in an experimental infection with the same strain. These observations on complementary action indicated the advantage of producing the mixture of isomers as the medication to be made available for clinical therapy.

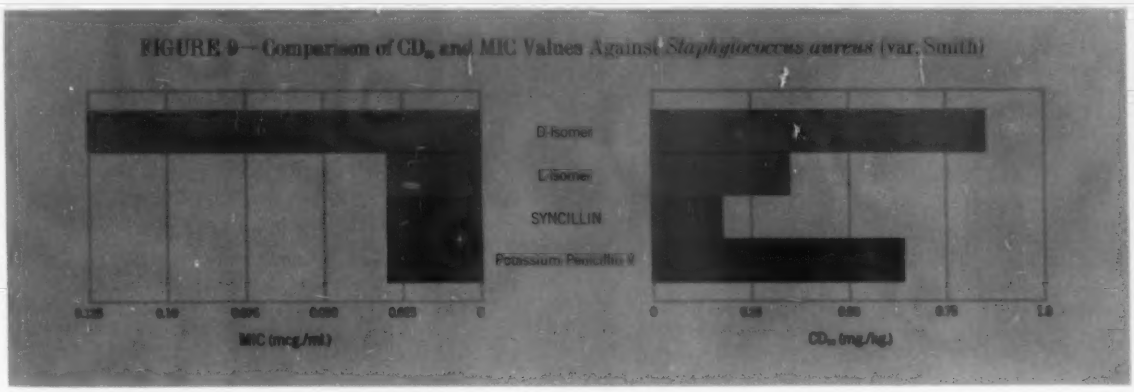


FIGURE 9 — Comparison of CD_{50} and MIC Values Against *Staphylococcus aureus* (var. Smith)

Isomeric complementarity has thus been demonstrated for:

— *certain penicillin-susceptible streptococci, staphylococci and corynebacteria* in vitro *(Table 1)*

— *penicillin-susceptible staphylococci* in vivo *(Figures 1 and 9)*

— *penicillin-resistant staphylococci* in vitro *(Figure 4)*

— *staphylococcal penicillinase antibiotic inactivation (Figure 5)*

SYNCILLIN

major therapeutic advantages accompany molecular asymmetry

Indications:

SYNCILLIN is recommended in the treatment of infections caused by pneumococci, streptococci, gonococci, corynebacteria, and penicillin-sensitive staphylococci. In addition, SYNCILLIN is effective against certain strains of staphylococci resistant to other penicillins.

SYNCILLIN, like other oral penicillins, is not recommended at the present time in deep-seated or chronic infections, subacute bacterial endocarditis, meningitis, or syphilis.

Dosage:

125 mg. or 250 mg. three times daily, depending on the severity of infection. Larger doses (e.g., 500 mg. t.i.d.) may be used for more severe infections. SYNCILLIN may be administered without regard to meals.

Beta hemolytic streptococcal infections should be treated with SYNCILLIN for at least ten days.

Precautions:

While present data suggest the possibility of reduced allergenic hazard, no definite conclusions may be drawn at this time. *Therefore the usual precautions with oral penicillin therapy must be observed.* Patients with histories of asthma, hay fever, urticaria, or previous reactions to penicillin should be watched with special care.

Diarrhea has been reported occasionally following heavy dosage. If this occurs, the interval between dosages should be lengthened.

If superinfection occurs during therapy, appropriate measures should be taken.

Since some strains of staphylococci are resistant to SYNCILLIN as well as to other penicillins, cultures and sensitivity tests should be performed where indicated by clinical judgment. As is true with all antibiotics, clinical response does not always correlate with laboratory bacterial sensitivity reports.

Supply:

125 and 250 mg. tablets, bottles of 25 and 100. 125 mg. powder for oral solution, 60 ml. vials.

References: 1. Lein, J.: Microbiology report to Bristol Laboratories Inc. 2. Wright, W. W.: Microbiology report to Bristol Laboratories Inc. 3. White, A. C.: Microbiology report to Bristol Laboratories Inc. 4. Dubos, R. J.: Bacterial and Mycotic Infections of Man, 3rd edition, Philadelphia, J. B. Lippincott Co., p. 690. 5. Cronk, G. A.: Clinical report to Bristol Laboratories Inc. 6. Wright, W. W.: Clinical report to Bristol Laboratories Inc. 7. Kass, E. H.: Am. J. Med. *18*:764 (May) 1955. 8a. White, A. C.; Couch, R. A.; Foster, F.; Calloway, J.; Hunter, W., and Knight, V.: in Welch, H. and Marti-Ibañez, F.: Antibiotics Annual — 1955-1956, Medical Encyclopedia, Inc., New York, 1956, p. 490. b. Data on file — at Bristol Laboratories. 9. Flippin, H. F.: Pennsylvania M. J. *62*:864 (June) 1959. 10. Kligman, A.: Clinical report to Bristol Laboratories Inc. 11. Blau, S., and Kanof, N.: Clinical report to Bristol Laboratories Inc. 12. White, A. C.: Clinical report to Bristol Laboratories Inc. 13. Prigot, A.: Clinical report to Bristol Laboratories Inc. 14. Robinson, C.: Clinical report to Bristol Laboratories Inc. 15. Dube, A. H.: Clinical report to Bristol Laboratories Inc. 16. Ferguson, B.: Clinical report to Bristol Laboratories Inc. 17. Rutenburg, A. M.: Clinical report to Bristol Laboratories Inc. 18. Richardson, J. H.: Clinical report to Bristol Laboratories Inc. 19. Bunn, P. A.: Clinical report to Bristol Laboratories Inc. 20. Yow, E. M.: Clinical report to Bristol Laboratories Inc.

BRISTOL

major therapeutic advantages accompany molecular asymmetry

SYNCILLIN

CHOICE THERAPY FOR THE "OLDER" PATIENT WITH MILD TO MODERATE HYPERTENSION

Rx Veratrite®

More than 13,000,000 prescriptions attest that Veratrite continues to be the antihypertensive of choice for the older hypertensive patient. Veratrite can be prescribed safely and routinely for those who usually cannot tolerate more potent drugs.

Veratrite now contains cryptenamine which acts centrally to produce a gradual fall in blood pressure, yet improves circulation to vital organs, relieves dizziness and headache, and imparts a distinct sense of well-being. Furthermore, Veratrite achieves its effects with unusual safety and without annoying side effects.

Each Veratrite tabule contains: Cryptenamine (tannates), 40 C.S.R.* Units; Sodium nitrite, 1 gr.; Phenobarbital, ¼ gr. Dosage: 1–2 tabules t.i.d., preferably 2 hours after meals.

*Carotid Sinus Reflex

Neisler IRWIN, NEISLER & CO. • DECATUR, ILLINOIS

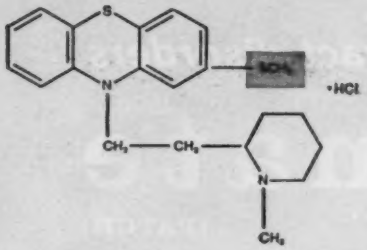
greater specificity
of tranquilizing action
—divorced from such
"diffuse" effects as
anti-emetic action
—explains why

Mellaril

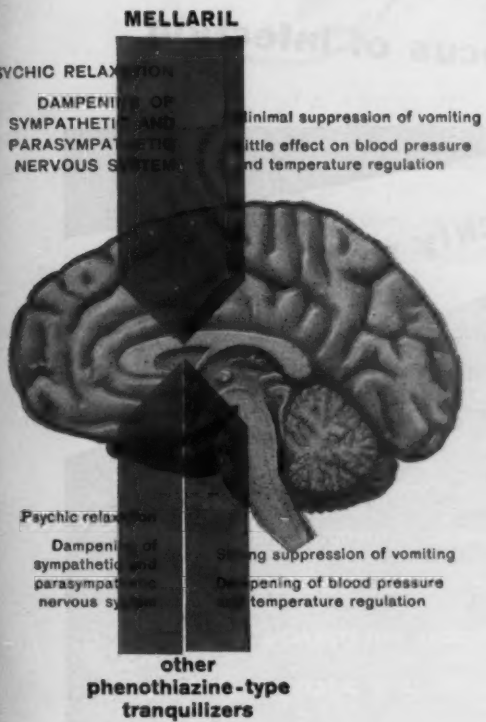
THIORIDAZINE HCl

"Thioridazine [MELLARIL] is as effective as the best available phenothiazine, but with appreciably less toxic effects than those demonstrated with other phenothiazines. This drug appears to represent a major addition to the safe and effective treatment of a wide range of psychological disturbances seen daily in the clinics or by the general practitioner."*

a new advance in tranquilization:
greater specificity of tranquilizing action results in fewer side effects



The presence of a thiomethyl radical ($S\text{-}CH_3$) is unique in Mellaril and could be responsible for the relative absence of side effects and greater specificity of psychotherapeutic action. This is shown clinically by:


MELLARIL
PSYCHIC RELAXATION
DAMPENING OF SYMPATHETIC AND PARASYMPATHETIC NERVOUS SYSTEM
Minimal suppression of vomiting
Little effect on blood pressure and temperature regulation
Psychic relaxation
Dampening of sympathetic and parasympathetic nervous system
Suppression of vomiting
Dampening of blood pressure and temperature regulation
other phenothiazine-type tranquilizers

1 A specificity of action on certain brain sites in contrast to the more generalized or "diffuse" action of other phenothiazines. This is evidenced by a lack of appreciable anti-emetic effect.

2 Less "spill-over" action to other brain areas — hence, absence of undue sedation, drowsiness or autonomic nervous system disturbances.

3 A notable absence of extrapyramidal stimulation.

4 Lack of impairment of patient's normal drive and energy.

5 Virtual freedom from such toxic effects as jaundice, photosensitivity, skin eruptions, blood forming disorders.

INDICATION	USUAL STARTING DOSE	TOTAL DAILY DOSAGE RANGE
ADULTS: Mental and Emotional Disturbances:		
MILD—where anxiety, apprehension and tension are present	10 mg. t.i.d.	20-60 mg.
MODERATE—where agitation exists in psychoneuroses, alcoholism, intractable pain, senility, etc.	25 mg. t.i.d.	50-200 mg.
SEVERE—in agitated psychotic states as schizophrenia, manic depressive, toxic psychoses, etc.:		
Ambulatory	100 mg. t.i.d.	200-400 mg.
Hospitalized	100 mg. t.i.d.	200-800 mg.
CHILDREN: BEHAVIOR PROBLEMS IN CHILDREN	10 mg. t.i.d.	20-40 mg.

MELLARIL Tablets, 10 mg., 25 mg., 100 mg.

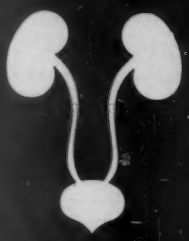
*Ostfeld, A. M.: Scientific Exhibit, American Academy of General Practice, San Francisco, April 6-9, 1959

SANDOZ

in urinary tract disorders

Suromate®

(PATCH)



hits the focus of infection

quickly relieves pain

Low triple-sulfa dosage minimizes toxicity, yet provides prompt and adequate therapeutic blood levels to control infection. Suromate quickly relieves pain, irritation, burning and urgency . . . offers the built-in safety factor of urine alkalizing potassium citrate.

● ***Prevents pooling, crystalluria, drug resistance and superinfection.***

DOSAGE: Adults—Initial dose three tablets, then two tablets four times a day. Take with water.

SUPPLIED: Bottles of 100 and 500 tablets.

Each Suromate tablet contains:

Sulfadiazine	100 mg.
Sulfamerazine	100 mg.
Sulfacetamide	100 mg.
Extract of hyoscyamus (contains 0.155% of alkaloids)	5.75 mg.
Potassium citrate	200 mg.

SMP

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when upper respiratory congestion is complicated by bacterial invaders

TRISULFAMINIC provides logical therapy

- for the patient ill with congestion and infection of the upper respiratory tract, as in purulent rhinitis, sinusitis, tonsillitis and otitis media, when caused by sulfa-susceptible bacteria;
- because secondary invasion by such bacteria so frequently follows the common cold.[1]

the reasons for combining Triaminic with triple sulfas

Triaminic and triple sulfas are not only pharmacologically *compatible*, they are a therapeutically *logical* combination for upper respiratory infections: Triaminic for effective decongestant relief from rhinitis, rhinorrhea and sinusitis;[2] triple sulfas for well-established antibacterial action.

The advantages of Trisulfaminic in upper respiratory infections include: proved effectiveness; safety; economy; ease of administration; less likelihood of sensitivity reactions;[3] compatibility with antibiotics and other antibacterial therapy. Provided also as Suspension for additional convenience.

Trisulfaminic®

TRIAMINIC WITH TRIPLE SULFAS

Available as TABLETS and SUSPENSION

Each easy-to-swallow Trisulfaminic Tablet or 5 ml. teaspoonful of Suspension provides:

Triaminic® .....25 mg.
(phenylpropanolamine HCl 12.5 mg.
pheniramine maleate ..... 6.25 mg.
pyrilamine maleate ..... 6.25 mg.)
Trisulfapyrimidines, U.S.P. .....0.5 Gm.

Dosage:

Adults—2 to 4 tablets or tsp. initially, followed by 2 tablets or tsp. every 4 to 6 hours until the patient has been afebrile 3 days. *Children 8 to 12* — 2 tablets or tsp. initially, followed by 1 tablet or tsp. every 6 hours. *Children under 8*—dosage according to weight.

The palatability, convenience and effectiveness of the Suspension make it especially suitable for children and for those older patients who prefer liquid medication.

References: 1. Cecil, R. L., et al.: J.A.M.A. 124:3 (Jan. 1) 1944. 2. Fabricant, N. D.: E.E.N.T. Monthly 37:460 (July) 1958. 3. Beckman, H.: Drugs, Their Nature, Action & Use, Saunders, Philadelphia, 1958, p. 527.

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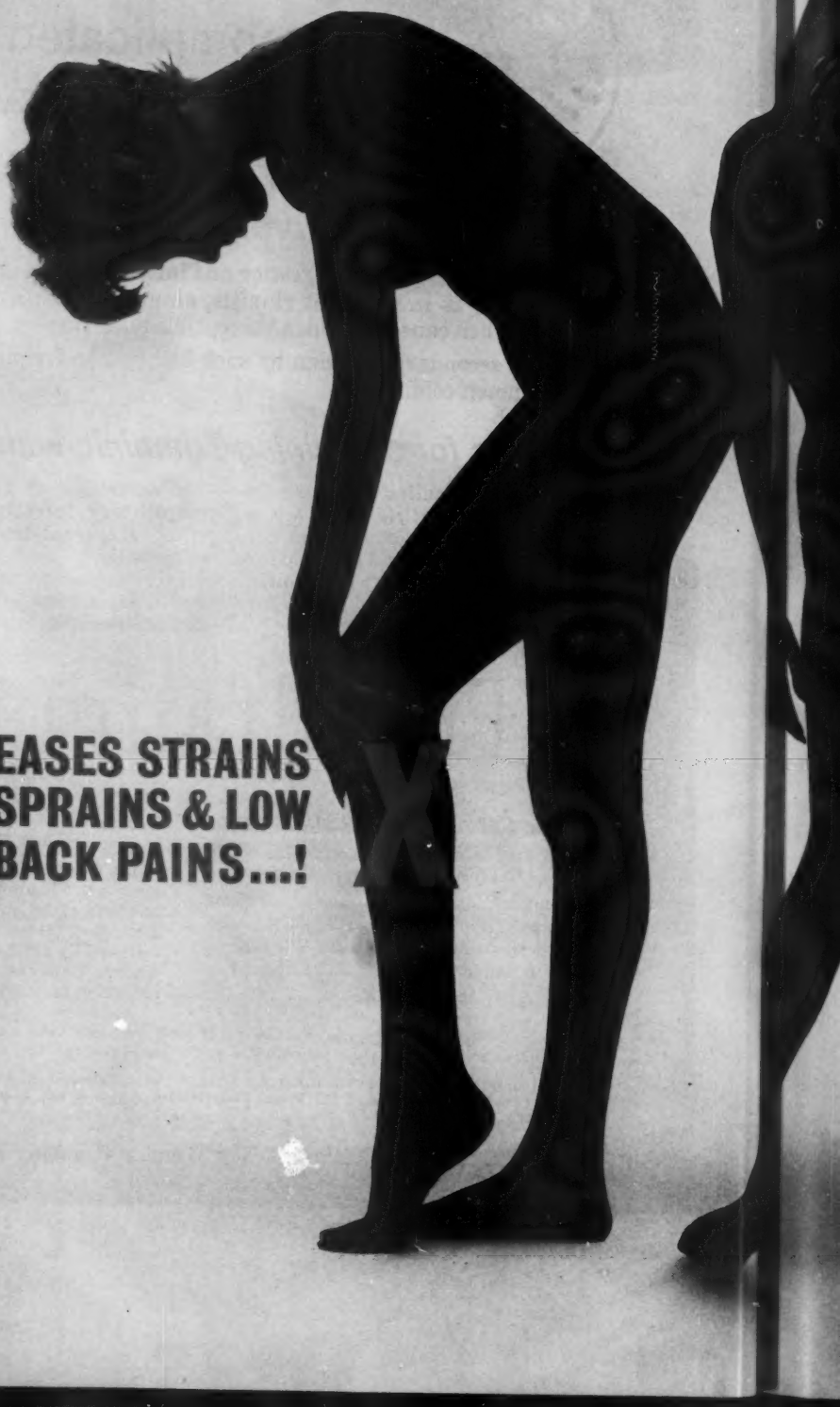
ANNOUNCING SCHERING'S NEW MYOGESIC[X]



RELA™ EASES STRAINS SPRAINS & LOW BACK PAINS...!

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RELA—a new myogesic for better relaxant *and* analgesic therapy—more adept management of spasm and pain in strains, sprains and low back pains.

RELA—though a single drug—is a true myogesic and works rapidly to achieve three desired effects...

Rela relaxes acute muscle spasm
Relief of muscle spasm (96% excellent to good effectiveness)[1]

Rela provides a unique quality of persistent pain relief through its relaxant and analgesic actions
"Relief from pain was usually rapid and sometimes dramatic"[1]

Rela, through relaxation and analgesia, assures daytime ease and nighttime rest
"... A number of patients reported freedom from insomnia which they attributed to freedom from pain."[1]

indications: RELA is most beneficial in those conditions of the musculoskeletal system manifesting pain, stiffness and spasm.

safety: Studies of more than 1400 patients indicate that the toxicity of RELA is exceptionally low. In human subjects, respiratory, blood pressure or blood chemistry changes and/or renal, hepatic or endocrine dysfunction have not been reported.

dosage: The usual adult dosage of RELA is one tablet 3 times daily and at bedtime. RELA has a rapid onset of action, with relief usually apparent within 30 minutes, and persisting for at least 6 hours.

supply: RELA is available as 350 mg., pink, coated tablets in bottles of 30.

1. Kuge, T.: To be published.

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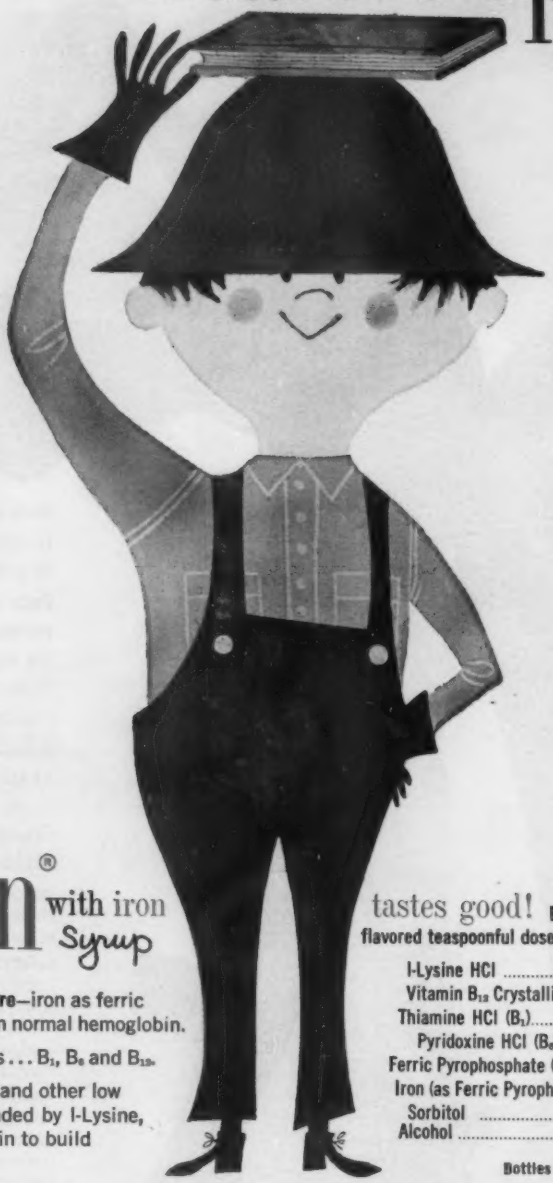
muscle-analgesic relaxant

Schering

make them measure up



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help restore the normal blood picture—iron as ferric pyrophosphate to restore or maintain normal hemoglobin.

boost appetite and energy—vitamins... B_1, B_6 and B_{12}.

upgrade low-grade protein—cereals and other low protein favorites of children, upgraded by l-Lysine, work with meat and other top protein to build stronger bodies.

tastes good! **Each daily cherry-flavored teaspoonful dose (5 cc.) contains:**

l-Lysine HCl	300 mg.
Vitamin B_{12} Crystalline	25 mcgm.
Thiamine HCl (B_1)	10 mg.
Pyridoxine HCl (B_6)	5 mg.
Ferric Pyrophosphate (Soluble)	250 mg.
Iron (as Ferric Pyrophosphate)	30 mg.
Sorbitol	3.5 Gm.
Alcohol	0.75%

Bottles of 4 and 16 fl. oz.

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for the tense and nervous patient

relief comes fast and comfortably

–does not produce autonomic side reactions
–does not impair mental efficiency, motor control, or normal behavior.

Usual Dosage: One or two 400 mg. tablets t.i.d.

Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets or as MEPROTABS*–400 mg. *unmarked,* coated tablets.

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NOW

. . . a new way to relieve pain and stiffness in muscles and joints

indicated in:

MUSCLE STIFFNESS

LUMBOSACRAL STRAIN

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TRAUMATIC STRAINS AND BRUISES

POSTOPERATIVE MYALGIA

■ Exhibits unusual analgesic properties, different from those of any other drug ■ Specific and superior in relief of SOMAtic pain ■ Modifies central perception of pain without abolishing natural defense reflexes ■ Relaxes abnormal tension of skeletal muscle

SOMA™

N-isopropyl-2-methyl-2-propyl-1, 3-propanediol dicarbamate

■ More specific than salicylates ■ Less drastic than steroids

■ More effective than muscle relaxants

SOMA has an unique analgesic action. It apparently modifies central pain perception without abolishing peripheral pain reflexes. SOMA is particularly effective in relieving joint pain. Patients say that they feel better and sleep better with SOMA than with previously used analgesic, sedative or relaxant drugs.
SOMA also relaxes muscle hypertonia, with its stresses on related joints, ligaments and skeletal structures.

ACTS FAST. Pain-relieving and relaxant effects start in 30 minutes and last 6 hours.

NOTABLY SAFE. Toxicity of SOMA is extremely low. No effects on liver, endocrine system, blood pressure, blood picture or urine have been reported. Some patients may become sleepy, particularly on high dosage.

EASY TO USE. Usual adult dose is one 350 mg. tablet 3 times daily and at bedtime.

SUPPLIED: Bottles of 50 white coated 350 mg. tablets.
Literature and samples on request.

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meprobamate with dextro-amphetamine sulfate LEDERLE

meprobamate eases tensions of dieting

d-amphetamine depresses appetite and elevates mood

...without overstimulation

...without insomnia

...without barbiturate hangover

Each coated tablet (pink) contains:
d-amphetamine sulfate .... 5 mg.
meprobamate ..... 400 mg.
Dosage: One tablet taken one-half to one hour before each meal.

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Results with "... antacid therapy with DAA are essentially the same as ... with potent anticholinergic drugs."

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Dihydroxy aluminum aminoacetate, N.N.R.

In recent years, a number of new synthetic anticholinergic drugs with numerous and varying side effects have been investigated for treatment of peptic ulcer. However, a double-blind study conducted recently by Cayer et al suggests that the use of such anticholinergic drugs is seldom necessary. The authors concluded that "The percentage of 'good to excellent' results obtained in patients on continuous long-term antacid therapy with DAA (74%) is essentially the same as that previously noted in ulcer patients treated under similar conditions with potent anticholinergic drugs alone."

The authors' choice of dihydroxy aluminum aminoacetate (DAA) was based on the fact that "the tablet form of DAA (is) more active than a variety of straight aluminum hydroxide magmas." They further commented that "Because of the convenience of tablet medication as compared with the liquid gel—a convenience which in the use of other tablets is gained at the expense of therapeutic effectiveness—dihydroxy aluminum aminoacetate was used exclusively."

ALGLYN (dihydroxy aluminum aminoacetate) Tablets are supplied in bottles of 100 tablets (0.5 Gm. per tablet).

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for control of nasal allergies
and seasonal hay fever

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BRAND OF TIMED DISINTEGRATING ANTIHISTAMINE-DECONGESTANT TABLETS

Each tablet contains:

- 6.0 mg. Chlorpheniramine Maleate
- 37.5 mg. Pyrilamine Maleate
- 15.0 mg. Phenylephrine Hydrochloride

ONE TABLET

swiftly drys up nasal secretions;
yields maximum response 10 to 12 hours

One third of the dosage disintegrates immediately to control irritating nasal secretions. The remaining dosage releases gradually to provide a therapeutic effect up to 10 to 12 hours. Only minimum side effects and low pressor.

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NIAMID gives the depressed elderly person a new sense of well-being. The family will notice a sunnier outlook, an alert interest in group activities, a renewed awareness of personal appearance, and a return of appetite. Your patient will be more cooperative and less demanding.

You can expect to see the same excellent response to NIAMID in a wide variety of depressive syndromes—acute or chronic, mild or severe, whether associated with long-standing or incurable illness, or masquerading as organic disease.

NIAMID side effects are infrequent and mild, and often lessened or eliminated by a reduction in dosage. NIAMID has not been reported to cause jaundice, and significant hypotensive effects have rarely been noted.

DOSAGE: Start with 75 mg. daily in single or divided doses, and adjust according to patient response. NIAMID acts slowly, without rapid jarring of physical or mental processes. Some patients respond to NIAMID within a few days, but for full therapeutic benefit, most require at least two weeks. NIAMID is available as 25 mg. (pink) and 100 mg. (orange) scored tablets.

Already clinically proved in several thousand patients—

Complete references and a Professional Information Booklet giving detailed information on NIAMID *are available on request from the Medical Department, Pfizer Laboratories, Division, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y.*

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the mood brightener in geriatrics

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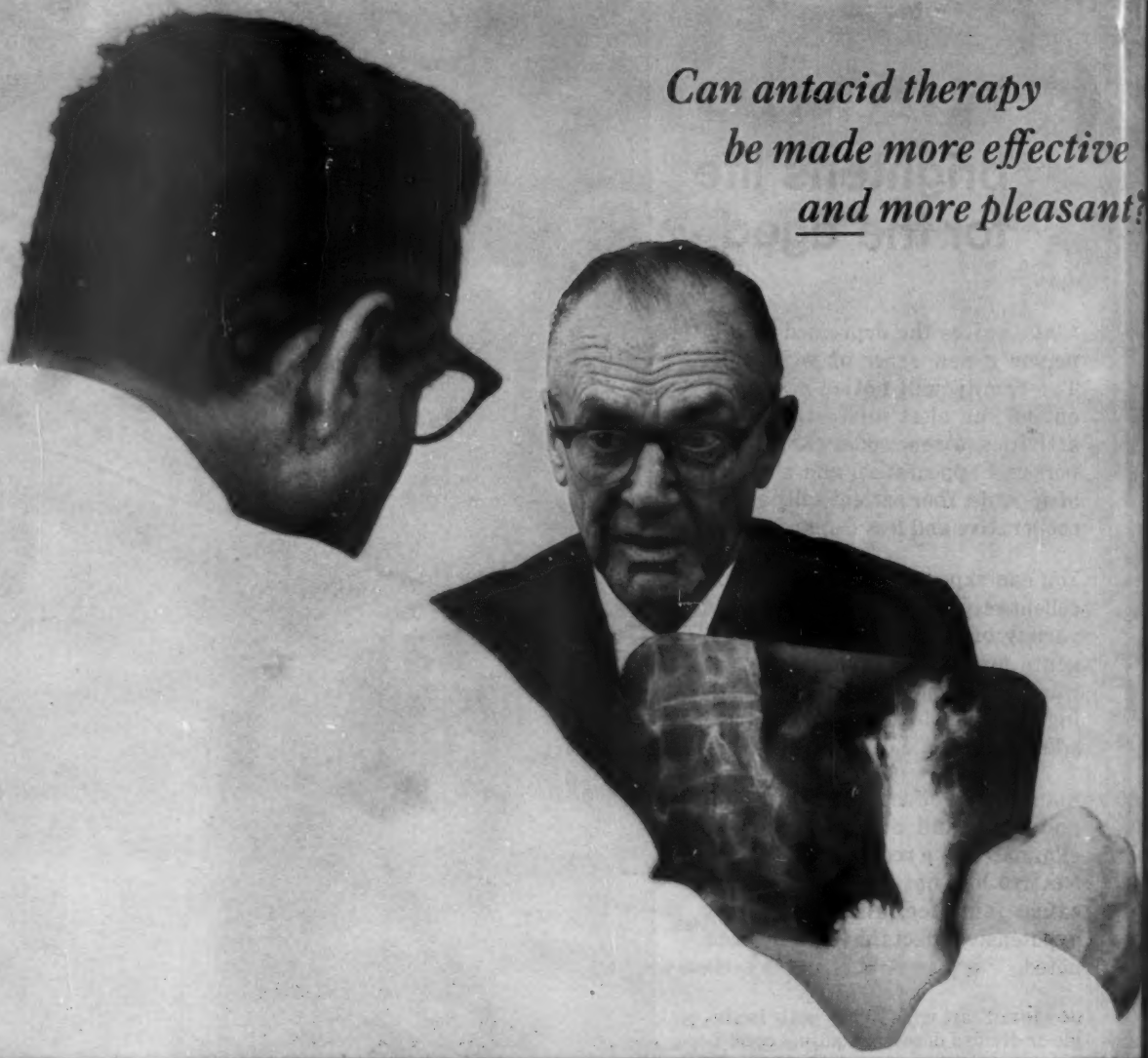
Pfizer *Science for the world's well-being™*



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1. *Neutralizes acid faster (quicker relief)*
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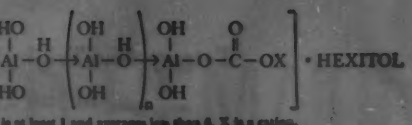

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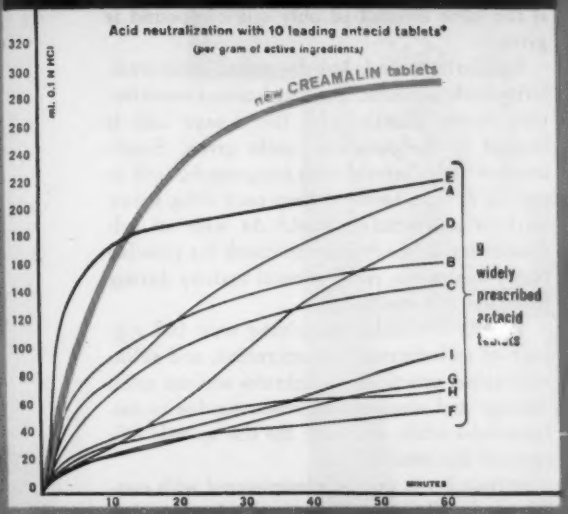
Quicker Relief • Greater Relief



Tablets were powdered and suspended in distilled water in a constant temperature container (37°C) equipped with mechanical stirrer and pH electrodes. Hydrochloric acid was added as needed to maintain pH at 3.5. Volume of acid required was recorded at frequent intervals for one hour.

CREAMALIN NEUTRALIZES *MORE* ACID *LONGER*

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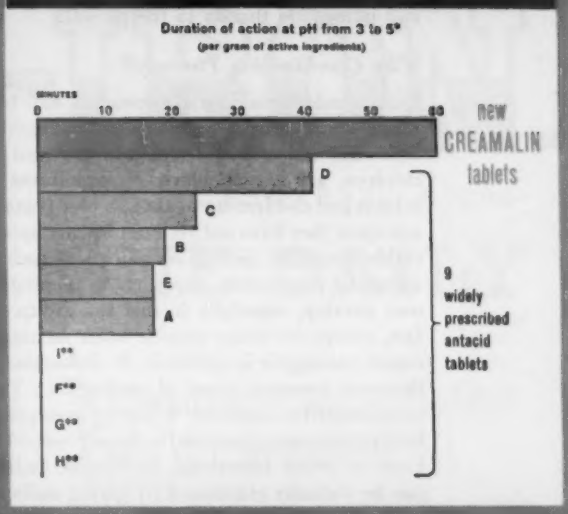

*Hinkel, E. T., Jr., Fisher, M. P. and Tainter, M. L.: A new highly reactive aluminum hydroxide complex for gastric hyperacidity. To be published.
**pH stayed below 5.

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Tetracycline-Triple Sulfa Combination (TETREX® c̄ T/S) in the Treatment of INFECTION

It is generally agreed that it is ideal to withhold antibiotic and chemotherapeutic drugs until after sensitivity tests show which antibacterial agent will be most effective. But very often, in actual practice, the physician knows that delay in starting antibacterial treatment may be detrimental to the welfare of his patient. He must then select the therapy to meet the most serious and immediate threats to the patient.

Why Combination Therapy?

Certain infections do not respond as well to a single agent as to a combination. *Hemophilus influenzae* infections, which are frequent in children, are a particularly serious threat to infants and children up to about 3 or 4 years of age since they have not yet built up any appreciable immunity. Serious complications such as influenzal pneumonia, empyema, or meningitis may develop, especially in this age group. In fact, except for those periods when meningococcal meningitis is epidemic, *H. influenzae* is the most frequent cause of meningitis.[1] This gram-negative organism is highly susceptible both to the tetracyclines and to the sulfonamides. Even in severe infections, therapeutic failure can be virtually eliminated by giving sulfonamides plus tetracycline.[1] These two agents together constitute the treatment of choice, and give better results than either alone.[2]

Sulfonamides remain the drugs of choice for all meningococcal infections, including meningitis. They readily penetrate the blood-brain barrier and pass into the cerebrospinal fluid in good concentrations.[3] In treating overwhelming meningococcal infections, and complicating infections of the upper respiratory tract caused by other organisms, the addition of tetracycline to sulfas can be valuable.[4]

In recent years the sulfonamides have again been prescribed more and more frequently. In certain serious infections, better results can be obtained with a combination of antibiotic and sulfonamide than with either drug alone (e.g., severe pneumococcal pneumonia or pneumococcal meningitis[5]). Furthermore, mixed infections, to which young children are particularly susceptible, often respond only to combination therapy such as tetracycline with sulfonamides (TETREX c̄ T/S).

Why Triple Sulfas?

Some sulfonamides, though therapeutically useful, frequently crystallize and cause renal damage. Sulfonamide mixtures are designed to prevent this effect. It is known that different substances can coexist in solution without interfering with each other's solubility. In such a solution each component behaves as if it alone were present. Thus, a much larger total amount of sulfonamide can exist in the urine without precipitating if a mixture is administered than if the same amount of only one compound is given.

Similarly, there is less danger of hypersensitivity with mixtures. The incidence of sensitization varies directly with the dosage and is limited to the particular sulfa given. Simultaneous use of several sulfa compounds, each in partial dosage, tends to keep each drug below its own sensitization level.[3] As with all sulfonamides, it is advisable to check for possible blood dyscrasias, rash, or renal toxicity during extended administration.

TETREX c̄ T/S, by combining only 167 mg. each of sulfadiazine, sulfamerazine, and sulfamethazine, practically eliminates serious renal damage and sensitization reactions due to sulfonamides while retaining the therapeutic efficacy of the total dose.

TETREX c̄ T/S can be administered with confidence in all severe and mixed infections due to tetracycline-sensitive and sulfonamide-sensitive organisms, including infections of the upper respiratory, urinary, and gastrointestinal tracts.

References: 1. Alexander, H. E.: The hemophilus group. In: Dubois, R. J.: Bacterial and Mycotic Infections of Man. Ed. 3, Philadelphia, J. B. Lippincott Co., 1958, p. 470ff. 2. Goodman, L. S., and Gilman, A.: The Pharmacological Basis of Therapeutics. Ed. 2, New York, The Macmillan Co., 1956, pp. 1322-1323. 3. Beckman, H.: Drugs — Their Nature, Action, and Use. Philadelphia, W. B. Saunders Co., 1958, pp. 527-528. 4. Dingle, J. H.: Meningococcal infections. In: Cecil, R. L., and Loeb, R. F.: A Textbook of Medicine. Ed. 9, Philadelphia, W. B. Saunders Co., 1955, p. 196ff. 5. Goodman, L. S., and Gilman, A.: The Pharmacological Basis of Therapeutics. Ed. 2, New York, The Macmillan Co., 1956, p. 1308.

TETREX® c̄ T/S

Antibiotic-triple sulfa combination in a palatable, cherry-flavored syrup.

Each 5 ml. teaspoonful contains:

Tetracycline (ammonium polyphosphate buffered equivalent to tetracycline HCl activity)	125 mg.
Sulfadiazine	167 mg.
Sulfamerazine	167 mg.
Sulfamethazine	167 mg.

This suspension may be stored at normal room temperature.

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REFER TO PDR

for immediate and prolonged relief in arthritis

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References:
1. Bagnall, A. W.: *Canad. M.A.J.* 77:182-194,1957.
2. Goodman, L. S., and Gilman, A.: *The Pharmacol. Basis of Therapy*, 1955, p. 299.
3. Smith, P. K., *et al.*: *J. Pharmacol. & Exper. Therap.* 87:237-255, 1946.
4. Wiggers, C. J.: *Physiol in Health & Disease*. 1955, pp. 918, 1011.

Tritis gives the fast analgesic action of salicylamide plus the prolonged therapeutic effect of chloroquine. It provides both subjective and objective relief in rheumatoid arthritis and related collagen diseases. Ascorbic acid helps to repair tissues involved in such diseases. Tritis has a high degree of safety and is effective without the adverse reactions often associated with adrenocortical hormones and phenylbutazone.

Each Tritis tablet contains:
chloroquine diphosphate . . 125 mg.
salicylamide . . . . . 300 mg.
ascorbic acid . . . . . 50 mg.

Recommended dosage: 2 tablets at bedtime. If nausea and headaches occur, discontinue therapy for several days, then resume treatment with 1 tablet at bedtime.

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VARIDASE is not an anti-infective, but by increasing the permeability of the fibrin wall, it eases penetration of natural regenerative factors and fosters healthy tissue growth, making infection less likely.

VARIDASE Buccal Tablets contain: 10,000 Units Streptokinase and 2,500 Units Streptodornase.

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Quality and uniformity you can depend on. Wesson has a poly-unsaturated content better than 50% . Only the lightest cottonseed oils of the highest iodine number are selected for Wesson and no significant variations in standards are permitted in the 22 exacting specifications required before bottling.

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clears the tineas from head to toe– orally

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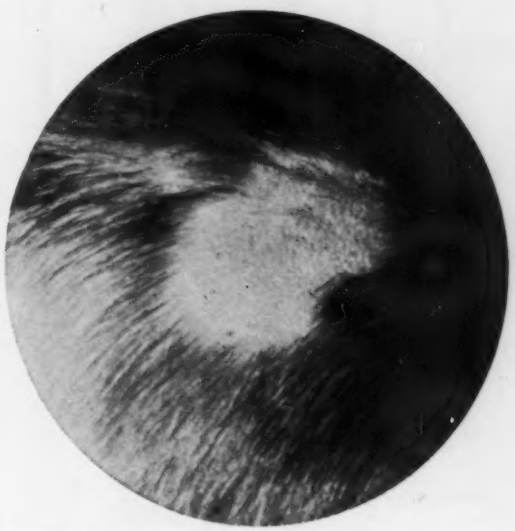
In tinea capitis



Before FULVICIN: Tinea capitis *(Microsporum audouini)* in a 7-year-old boy.

After FULVICIN: Normal, new hair growth after 6 weeks of oral therapy.

Photos courtesy of M. M. Nierman, M.D., Calumet City, Ill.

Lesions clear, cultures become negative in

tinea corporis: 4 to 5 weeks[1]
tinea cruris: 4 to 6 weeks[1]
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tinea pedis: 6 to 8 weeks[1]

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1. Robinson, H. M., Jr., *et al.*: Griseofulvin, Clinical and Experimental Studies, A.M.A. Arch. Dermat., in press.

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10 to 25 pounds	5 mg. per pound of body weight	every six hours
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The Virginia MEDICAL MONTHY

December, 1959
Vol. 86, No. 12
Whole No. 1291

Guest Editorial . . . .

The Doctor and the Detail Man

A CAREFULLY planned survey made by *Modern Medicine*, reported in the Harvard Business Review several years ago, revealed some interesting facts about attitudes of 129 practicing physicians concerning the detailing of drugs and detail men. Fourteen per cent of the physicians poled were unfavorably disposed and would prefer not to see any detail men. Seventeen per cent were favorably disposed, but qualified their feeling by protesting that there were too many detail men or that they were not well informed. Forty-seven per cent were without qualification favorably disposed and 22 per cent were enthusiastic.

Of the total of 69 per cent who were favorably disposed the following reasons for this attitude were offered: 1. The detail men brought useful information of new products before they were generally advertised. 2. Some well trained men actually were able to answer scientific pharmaceutical questions which the physician wanted answered. 3. The doctor welcomed the detail man for his pleasant personality and his ability as a story-teller and gossiping ability to while away time during lulls in his professional day, particularly if his practice was not a busy one.

Of the 31 per cent of physicians who reacted unfavorably the following were the reasons for their objections: 1. Excessive number of detail men became burdensome. 2. There was a lack of pinpointing by the detail men in products with which the physician or specialist was primarily interested. 3. Lack of accurate scientific information—the sales pitch seemed to predominate over factual presentation. 4. Interruption of office routine by non-scheduled arrivals of detail men.

All of the large pharmaceutical houses have employed detail men since about 1924. Since World War II the number of companies has vastly increased and even the smaller local distributing houses have added their men to the vast army of detail men. So for the past twenty years and particularly the past ten, the detail man with some notable exceptions has become a salesman first and a purveyor of scientific information, if any, a poor second.

This has led to a general deterioration of the once trusting relationship of the physician to the detail man. No longer is he sent out to inform the physician of scientific developments in the pharmaceutical field, but rather, by a brilliant sales talk frequently canned at headquarters by the advertising department, is the physician cajoled and by expensive charts brilliantly colored, using quotations from famous doctors or research workers of whom he has never heard. Furthermore, his good will is encouraged almost to the point of bribery by hand lotion for his secretary, pill boxes for his wife, and innumerable but expensive gadgets for his office and home. The physician is made to feel indebted to the manufacturer of a particular drug, and in

a subconscious human way he feels induced to use the drugs of the nice man who has provided him with a pen which will write for a whole year under water or through butter if necessary. Actually, these gratituities are costing his patient more at the drug counter and him more in taxes as the cost of these items is merely written off as expense and hence, to that extent, is paid for by the Federal Government. Doctors are not commercial merchandisers nor should the pharmaceutical houses treat them as though they were. I am afraid the advertising departments of many drug houses have taken over completely the policy of professional relationship which they could never understand and so have lowered the professional image of their companies. The answer to this may be money. Here again research is outpricing itself. The result is professional deterioration, a loss of sight of the primary objective of the pharmaceutical manufacturer, and a rising suspicion on the part of the physician.

Further example of professional deterioration can be sighted in the behavior of a few detail men who have brought ill feeling on those who are ethical. Reports of rummaging through the files of pharmacies to learn the prescription habits of the physician are constantly coming to the attention of the physician, brazenly by the detail man himself. He often seems to know more about the doctor's prescription habits than the doctor himself. Invasion by the detail man of public hospital records on the floor has recently caused two large hospitals to restrict interviews of detail men with their house officers.

Ethically trained men would not even think of this type of market surveying. Unfortunately during World War II when trained men were unavailable, high powered salesmen with little or no scientific or pharmaceutical background were employed to visit physicians. They could offer only ventriloquistic recordings and were stumped by the simplest scientific question. They wasted the doctor's time and created a poor image of their company. Their days, I am pleased to say, are numbered, and I believe the tendency is already back to the trained pharmacist or scientist, who has both the capacity and the motivation of the true professional detail man.

The ideal detail man would, in my own opinion, be a trained pharmacist or research worker who is interested in the scientific value and use of his product, its limitations, dangers, price and advantages over his competitors. There is no harm in clothing it attractively in his presentation. He should not consider himself a medical authority or give answers which he is not capable of giving. He should refrain from asking the physician to promise to use his product or do anything to check up on whether the doctor used his products. He should avoid gossiping about other doctors or other detail men. He should respect the doctor's time, and offer to come by appointment. He should be proud of his profession and do everything possible to keep it on a professional level.

I am happy that the great majority of the detail men whom it has been my pleasure to know qualify. My hope is that those in charge of drug manufacturing will understand that the image of their company in the doctor's mind is made to a great extent by the detail man in the local scene. Personality is always indelibly impressed on the product. I like the motto of a well known American drug manufacturer, "The priceless ingredient of every product is the honor and integrity of its maker."

JOHN P. LYNCH, M.D.

1000 West Grace Street
Richmond, Virginia

The Child Handicapped by Cerebral Palsy

GEORGE G. DEAVER, M.D.
New York, New York

CEREBRAL PALSY may be defined as a neuromuscular disability caused by injury to the brain. Thus cerebral palsy may be described as a group of conditions, which may originate before birth or during infancy and childhood. In addition to the motor dysfunction, we find 53 per cent of these brain-damaged children have associated eye conditions; approximately 75 per cent have speech problems; 70 per cent of those coming for treatment are mentally retarded, and about five per cent have a hearing loss. Also there are sensory defects, convulsions, learning difficulties and behavioral disorders of organic origin.

Studies have indicated that approximately one infant in every 200 live births will be born with cerebral palsy—one every 53 minutes. It has been estimated that throughout the United States there are approximately 550,000 persons with cerebral palsy, 200,000 of whom are under 21 years of age. Cerebral palsy is now the most common condition crippling children.

ETIOLOGY

There seems to be no economic, social or geographical predilections for cerebral palsy. The etiological factors may be classified as follows:

Prenatal—from the time of conception to the time of the labor.

a. Hereditary. Tay-Sachs disease and tuberous sclerosis.
b. Congenital. Anoxia, maternal infections, metabolic disease, and Rh factor.

Natal—from the onset of labor to the birth of the child.

a. Anoxia. Due to obstruction of cord.
b. Asphyxia. As a result of mechanical respiratory obstruction.
c. Analgesics. Affecting the respiratory center of the infant.
d. Trauma. Injuring the brain during labor or by forceps delivery.
e. Sudden Changes in Pressure. As in caesarean section.
f. Prematurity.
g. Low Vitamin K Level.

Postnatal—from the time of birth of the child.

a. Trauma. Skull fractures or wounds.
b. Infections. Meningitis and encephalitis.
c. Vascular. Hemorrhage, thrombosis and embolus.
d. Anoxia. Carbon dioxide poisoning.
e. Neoplasms.

In order to verify some of the statements concerning the etiology, we selected 100 children in our clinic and obtained the records of the attending physician, the obstetrician and the hospital records. After an analysis of this data and correlation of all factors, the following conclusions were reached:

1. Sex was not a predisposing factor.
2. The age of the mother was apparently not a predisposing factor.
3. Being the first-born did not definitely act as a predisposing factor, for there were almost as many first-born normal siblings of children with cerebral palsy in our study as there were first-born cerebral palsied children.
4. Prematurity was definitely a predisposing factor. However, 50 per cent of the mothers had had some complication of pregnancy which could have been the direct cause of the prematurity of the infant. Prevention of prematurity, therefore, has to be through the mother.
5. Though the range of birth weights of the children in our study did not reveal even the normally expected percentage of heavy infants, in three cases excessive birth weight was probably a predisposing factor.
6. Multiple pregnancies with the associated prematurity may be considered as a predisposing factor.
7. Prenatal anoxia was considered an etiological agent in fifteen of our children with cerebral palsy, and in two of these cases was the only factor.
8. The percentage of mothers with toxemia was the same as seen in all gravidae. All of the

Presented at the Annual Assembly of the Virginia Academy of General Prictice, Richmond, May 8-10, 1959.

DEAVER, GEORGE G., M.D., *Medical Director, Children's Division, Department of Physical Medicine and Rehabilitation, New York University—Bellevue Medical Center.*

infants were premature, and five of the six had the spastic type of cerebral palsy.

9. Seven per cent of our cases were due to the Rh factor.
10. Diabetes was apparently an etiological factor in two children.
11. Two children had cerebral palsy due to infections in their mothers.

Our impression from the study of these 100 children is that the case of cerebral palsy caused by a single etiological factor is the exception, and that most cases are probably due to multiple etiological factors. It is quite evident that better obstetrical care during the antepartum period and the delivery would lessen the incidence.

Two of the causes of cerebral palsy are erythroblastosis and prematurity, and special consideration should be given both to the care of these infants and to preventive measures.

CLASSIFICATION OF TYPES

Having decided that the child has a neuromuscular disability and can be diagnosed as cerebral palsy, it is then necessary to classify the type which is based upon the observable clinical signs. There are six types of cerebral palsy which may be diagnosed as follows:

1. *Spasticity.* The spastic type is characterized by signs of pyramidal tract involvement, and is thought to be the result of pathology to the pre-motor area of the cortex. Characteristic of this type is a constant hyper-irritability of the muscles to stimuli. There is a stretch reflex and the muscles react by contracting. The deep reflexes are increased in the affected parts and when the lower extremities are involved the Babinski sign is present. To test for spasticity, the muscle group is placed in the contracted position and then suddenly moved in the opposite direction. If spasticity is present there will be a blocking or slowing up of the movement. Every muscle group must be tested in this manner to detect the parts of the body involved. Approximately 66 per cent of cerebral palsied patients are of the spastic type.

2. *Athetosis.* The chief characteristic of this type, which makes up about 19 per cent of the total number, are the slow, worm-like, involuntary, uncontrollable, unpredictable and purposeless motions.

Dr. Winthrop Phelps has classified twelve types of athetosis to which he gives the following descriptive names:

1. Rotary
2. Tremor
3. Dystonic
4. Shudder
5. Flail
6. Tension
7. Non-Tension
8. Hemi-Athetoid
9. Neck and Arm
10. Deaf
11. Balance Release
12. Emotional Release

3. *Rigidity.* About four per cent are of the rigid type which may be diagnosed by the resistance to slow passive motion. When the part is moved there is continuous resistance in agonist and antagonist muscles, simulating the sensation of bending a lead pipe. This is referred to as "lead pipe" type of rigidity. In some cases there is a discontinuous type of resistance and it is diagnosed as "cogwheel" rigidity. The degree of rigidity may vary from time to time, being present at one time and absent a few minutes later. The term "intermittent rigidity" is applied to this characteristic. The principal clinical finding in rigidity is the hypertonicity of the muscles rather than excessive motion. In many cases the rigidity is so great that no motion is present.

4. *Tremors.* The chief characteristics of this type are the involuntary, uncontrollable motions that are reciprocal and regular in rhythm. They are due to alternate agonist and antagonist contractions. The tremor type make up about two per cent of the total number of cerebral palsied patients.

5. *Ataxia.* The principal sign noted in the ataxia patient, estimated to be about eight per cent of the total, is disturbance of balance and equilibrium. The pathological lesion is due to involvement of the cerebellum and its tracts. The usual signs of "past-pointing" and "rebound phenomenon" are present but it is usually impossible to elicit these signs in an infant. It is difficult to diagnose ataxia in the infant until he starts to walk, when the disturbance in balance and equilibrium may be noted.

6. *Mixed Types.* Not all children with cerebral palsy can be diagnosed as true spastics, athetoids or ataxias. About 1 per cent of the total may be mixed cases in which all of these types may exist. Spasticity and ataxia usually appear as pure clinical types.

CLASSIFICATION ACCORDING TO EXTREMITIES INVOLVED

Having diagnosed the type of cerebral palsy it is necessary to describe the extremities involved.

The child who is diagnosed as a spastic may be a paraplegia, hemiplegia, triplegia or quadriplegia. All the other types, except in a very few cases, have

all four extremities involved and are classified as quadriplegias.

EARLY SIGNS OF BRAIN DAMAGE

The growth and development of the normal infant usually follows definite motor, adaptive, language and personal social patterns. By observing the behavior patterns of any child, the physician can match them against those of the normal child at the same age level and arrive at an estimate of the maturity level. Retardation in growth and development is usually observed if the brain is damaged.

It is relatively easy to detect the brain-injured child with spasticity and the severe rigidity types during the first few months. Those with mild degrees of athetosis and ataxia are seldom diagnosed until the child starts to walk.

We should be suspicious of brain damage during the first four weeks if the infant is lethargic, somnolent, fails to suck well, does not respond to stimuli, has respiratory difficulties or twitching or convulsions.

Brain damage should be suspected at about 3 to 4 months of age if any or all of the following are still present:

Shoulder lag, head lag, strabismus, thumb in cortical position, absence of reciprocal kicking, extension thrust, and inability of the child to raise its head and support itself on its arms in a prone position. This can be further corroborated at about 8 to 10 months of age if the child in addition is unable to roll itself over, pull itself to a sitting position and sit with fairly good balance without support. There should be at this age a purposeful reach, grasp and release.

Less than one per cent of normal children have strabismus at birth and 53 per cent of brain-damaged children. A child born with cross-eyes demands a careful neurological evaluation. If the child has not developed a reciprocal movement of the legs and the thumbs are overlapped by the fingers at the end of the third month we can suspect there is brain damage.

It is important to remember that the child with no neuromuscular disability but who is mentally retarded will be delayed in growth and development. If you examine a child at one year of age who has no neuromuscular involvement but is just able to sit erect unsupported, shows no cranial nerve involvement and does not say "Mama" we must conclude the child is retarded and his mental age is about nine months.

TREATMENT

Before outlining any program of treatment it is essential to evaluate intelligence, hearing, vision and speech. This requires the services of other qualified professional personnel, which can best be obtained at a cerebral palsy center.

The physician's responsibility is to supply the following information:

1. Etiology. Congenital or acquired and possible cause.
2. Diagnosis. Cerebral Palsy.
3. Classification of Type. Spastic, athetoid, ataxia, rigidity, tremor or mixed.
4. Disabilities. The parts of the body involved, such as hemiplegia, paraplegia, etc.
5. Severity. Mild, moderate or severe.

The *purpose* of treatment for any physically handicapped child is to teach him to meet the physical demands of daily living so that he can care for his toilet needs, have the maximum use of his hands, ambulate and have adequate speech and hearing. There is no unanimity of opinion on a specific method of treatment of the various types of cerebral palsy.

Time does not permit me to discuss the specific types of treatment recommended to meet the total needs of the brain-injured chlid. Therefore, I would like to present to you my opinion on the place of the family physician in helping the parents with the brain-injured child. No matter what you think, never say to a parent "the child is a hopeless case and you should put him in an institution." It is this type of advice which send these parents to the chiropractor and other cults. You can explain the problem to the parents and refer them to a cerebral palsy center or to a therapist for treatment. As the family physician you should care for the nutritional needs of the child and treat the respiratory and communicable diseases when they occur and give the parents the supportive help they need.

The general methods of treatment we use are as follows:

1. Have the therapist show the mother how to move the joints to prevent contracture.
2. Have the father build or buy the proper type of chair so the child can sit erect and develop head control.
3. At about 14 months of age we place the child in double long leg braces with a Knight spinal attachment. The father is then given the plans to make a "stand-up table." This is a box

with a tray attached. The child is placed in this box in his braces and thus develops standing balance and toys are placed on the tray in order that the chlid can develop hand coordination through play activities.

4. As the child develops physically and mentally he is then placed in the parallel bars where he is taught to grasp the bars and balance himself in the erect position. Then the hip locks are opened and he learns to ambulate with a four-point gait.
5. When this has been accomplished he is given crutches and taught how to ambulate with braces and crutches.
6. As the child develops we then open the knee locks on the braces to develop knee motion.

It is our hope to gradually reduce his braces as he develops strength and coordination. During this period the occupational therapist is teaching the child to dress and to feed himself, and the speech teacher is training the child in speech.

How far the child attains our goals depends upon the severity of his disability, his intelligence and cooperation. We cannot prognosticate the future potentials in all cases. Some of my children with a high I.Q. are not trainable as they will not cooperate, and I have some children with a 60 I.Q. who are making good progress.

DRUGS

The drugs which have been recommended to control abnormal neuromuscular movements, such as spasticity and athetosis, have proven to be of little or no value. Many of these children, especially the spastic hemiplegia child, have seizures. There is no drug which is effective in all types of seizures, and it is necessary to experiment clinically with drugs in various combinations. Phenobarbital is the drug of choice for grand mal seizures in children and Delantin in adults or a combination of the two. Mesantoin is the drug of choice when both grand mal and petit mal coexist. Bromides may be employed when none of the above are effective. Tridione and Paradione are the drugs of choice for petit mal. Both of these drugs have a synergistic toxic effect with Mesantoin.

SURGERY

Operative procedures on the muscles, tendons, nerves and bones are performed to correct deformities which interfere with rehabilitation or function. They have no curative effect. In the growing child it is often a useless procedure to operate if therapy or braces are not prescribed as the condition will occur as a result of growth. The greatest benefits are derived from surgery on the lower extremities of those with the spastic type of cerebral palsy.

During the last few years Dr. Irving Cooper has developed a neurosurgical operation on the brain for controlling involuntary movements. This procedure has good results in selected cases of Parkinson's Syndrome and excellent results in dystonia muscularum deformans but very poor results in our athetoid and rigidity types of cerebral palsy.

SUMMARY

In order to reduce the incidence of cerebral palsy it will be necessary to give more attention to the prevention of prematurity, immediate transfusion of infants with kernicterus, and for the family physician to give more attention to those things which we now know may cause injury to the brain.

If we are to help the cerebral palsied child and his parents it will be necessary for physicians to recognize the early signs of brain damage and plan programs of treatment.

To carry out a treatment program to meet the total needs of the cerebral palsied child requires personnel trained in the methods of evaluating neuro-muscular disabilities produced by brain damage and physical facilities to give the prescribed forms of therapy.

With increased interest and better understanding of the needs of the cerebral palsied child, we can expect many of these problems to be corrected.

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Minimizing the Genetic Hazard of Medical Radiation

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IN 1895, a German physicist, Wilhelm Conrad Roentgen, performed a famous experiment in which he enclosed a Crookes vacuum tube in a light and cathode ray-proof cardboard box, activated the tube while his hand was interposed between the box and a photographic plate, and found, on developing the plate, a shadowgraph of his hand. Because of the unknown nature of the invisible rays which had affected the plate, he called them x-rays.

The discovery of x-rays was in itself a terrifically exciting thing, the drama of which we still appreciate, but the familiarity of daily use has staled the drama of the plate, on which was seen a shadowgraph of the invisible structures of the hand as well as of the visible. For the first time in human history, it was possible to visualize subcutaneous anatomy and gross pathology in a living, intact subject. Rarely has a discovery been put to more prompt use. Within a few months, physicians were using x-rays to produce roentgenograms for medical diagnosis. In the 64 years that have passed, roentgenographic procedures and techniques have been devised which permit visual exploration of almost every macroscopic portion of the human organism. The accuracy of medical diagnosis has been incalculably advanced. For modern medicine to reach and maintain the high level at which it is now practiced, roentgenography was and is indispensable.

The development of the science of radiology, of which diagnostic roentgenology is a subdivision, has been accompanied by a growing understanding of the action of ionizing energy in tissue. This understanding is based on human suffering. Before the introduction of the hot cathode tube by Collidge in 1913, the uncertain x-ray output of the gas tubes, plus ignorance, led to many tissue reactions in the patients exposed to ionizing radiation. Most of the severe, avoidable injuries were sustained by the scientists who laid the foundations of radiology. Their innocently careless handling of x-rays and radium in time caused degeneration of the skin of the hands, leading to chronic ulcerations, carcinomas, amputations, and all too often to death itself. Gradually data was accumulated which made it possible to anticipate biological effects in terms of r dosage, the quality of the beam, its intensity, the volume of tissue radiated, the duration and frequency of exposure, etc.

Continual improvement in equipment led to exact control of x-ray output and to the production of roentgenograms of better quality, with the absorption of smaller amounts of ionizing energy in the tissues. It seemed that diagnostic roentgenology was moving from troubled to quiet waters until H. J. Muller discovered that radiation of the gonads accelerates the rate of mutation. This work was begun in about 1926, but it was not until 1946 that Muller received the Nobel Prize, and it was not until the present decade of rapid development of uses of atomic energy that the general public has become alarmed about the hazard of ionizing radiation. As the subject has been one of deep concern to radiologists from the early days of the development of their specialty, and as it is the radiologists who are responsible for the continually greater safety with which diagnostic roentgenology is practiced, they have been surprised at the sudden interest and dismayed at the fear with which some of their patients have been approaching them.

EXPOSURE TO RADIATION UNAVOIDABLE

After all, man cannot escape radiation. It is a part of the world in which he lives, a variable but ever present component of his environment. To add something to his background dosage does not introduce a new element in his journey through life. It is estimated that cosmic radiation and radiation from his surroundings produce an average 30 year cumulative gonadal dosage of 3000 to 4500 r. In a certain section of India, soil of unusual radioactivity may produce a 30 year cumulative gonadal dose of as much as 50,000 mr.[1] Incidentally, preliminary study

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of the inhabitants of the area shows no obvious evidence of somatic or genetic injury.

Nevertheless, because the hazard of radiation cannot yet be exactly defined, needless exposure should be avoided. In medical diagnosis, radiation should be used purposefully and the value of the information sought should outweigh the estimated hazard. When this principle is followed, the somatic hazard can be accepted as a calculated risk. In careful hands, it is less than many other hazards, medical and non-medical, accepted daily without qualms—anesthesia, tranfusions, automobile driving. The genetic hazard is another matter.

IMPROVEMENTS IN TECHNIQUE AND EQUIPMENT[1,2,3,11]

At this point, it is appropriate to review some of the measures radiologists are taking to minimize patient dosage during roentgenography. As they came to realize that even minute doses of radiation might be harmful, radiologists increased the filtration in their diagnostic units. Filtration of the x-ray beam cuts down the dosage to the patient by reducing the softer quality energy which is relatively unimportant in the production of the differential densities upon which depends the usefulness of the roentgenogram and the fluoroscopic screen. Dosimetry studies show that when x-ray beam is passed through a woman's abdomen, a 2 mm. Al filter cuts the skin dose over 50% and the ovary dose 20 to 25%. A 3 mm. Al filter reduces the skin dose by about 67%, the ovary dose by about 33%. Heavier filtration is of practical value only when kilovoltages of over 100 are used. Then filters of up to 0.25 mm. Cu are advantageous.

Reduction of either exposures time or milliamperage reduces the r dose received by the patient. With help and encouragement from radiologists, the x-ray film and equipment manufacturers have developed film and cassette screens of extraordinary speed, which permit reduction of exposure time, and ways of intensifying the fluoroscopic image, which permit reduction of milliamperage. Superior equipment makes it possible to use higher kilovoltages, and this, too, permits a reduction in milliamperes and exposure time.

New and better safety devices are constantly being added to x-ray equipment, lessening the chance of leaks and scatter, and the units are checked regularly by radiation physicists.

In order to eliminate unnecessary direct radiation of tissue and to minimize scattered radiation of nearby tissue, cones and shielding are used to full advantage. The examination is carefully planned to expose the smallest area permitting satisfactory visualization of the field of interest (Fig. 1). As

Fig. 1—At one time, it was common practice to include the entire abdomen on the initial roentgenogram in a gall bladder series. Today, the volume of tissue radiated is reduced by using a round cone to limit the field.

radiation beyond the x-ray film is obviously purposeless, rectangular cones to fit the film are often more useful than round ones because they permit the edges to be left unexposed (Fig. 2). All of these measures are equally useful in reducing the somatic hazard to the individual and the genetic hazard of radiation.

THE GENETIC HAZARD

To consider further the latter, a combination of lack of information about the exact genetic effect of a given x-ray dosage and about the precise amount of gonadal radiation which people are now receiving causes difficulties. To weigh the value of medical information which can be obtained only by radiating the gonads against the genetic hazard is not yet possible. But since it must be assumed that any dose of radiation, however small, can induce mutations and since the genetic damage done by radiation is cumulative, particular attention must be paid to the amount of radiation absorbed by the gonads.[4] Physicians have been heartened by recent reports from

the Russells, which were summarized by Cockeroft[5] in these words. "Hitherto, the direct proportionality of gene mutation with dose of radiation has been accepted as a law which holds, irrespective of dose

Fig. 2—G.I. radiograph taken with a rectangular cone small enough to leave the periphery of the film unexposed.

rate, down to the lowest accumulated doses. W. Russell and L. B. Russell have produced evidence for departure from linearity in the relation between mutation rate and dose for point mutations in the spermatogenia of male mice. Furthermore, they have shown that the mature egg cell of female mice is substantially less sensitive to the induction of mutations than the spermatogonia of the male. . . . These two facts will probably necessitate a complete reconsideration of the quantitative prediction of the genetic hazard." Physicians hope this reconsideration will ease tension.

A number of studies have been done to determine gonadal dosage delivered in the course of diagnostic x-ray procedures.[12] A review of these studies shows that the male gonads receive a large amount of scattered radiation during examinations in which they are at a distance from the direct beam of radiation than do the female gonads under the same circumstances. This is due to the protection afforded the ovaries by the thick pelvic tissues. But though the exteriorized position of the testes exposes them to scattered radiation, their location makes it possible almost always to keep them out of the direct beam. Their location also makes it possible sharply to reduce the dosage from both direct and scattered radiation by the use of simple protective shields (Fig. 3). By adding to other details of good

Fig. 3—Radiograph of a male pelvis with a gonadal shield in place.

technique, the shielding of the testes during roentgenography of the lower abdomen, pelvis, and hips, the dosage to the male gonads can be reduced by a factor of 20 or better.[2]

The position of the ovaries protects them from scattered radiation when they are at a distance from the beam, but on the other hand it requires them to be in or very close to the direct beam during a variety of diagnostic procedures involving the roentgenographic or fluoroscopic visualization of structures in the abdomen, pelvis, and hips. Because of the relative unimportance of the somatic hazard and the ease of avoiding testicular exposure, in the well run department of radiology, concern about genetic hazards of roentgen diagnosis can be focused upon a limited number of procedures in which the beam of radiation must be passed through or near the ovaries of female patients still within the child bearing age.

OVARY DOSES

Review of those portions of some of the studies to determine gonadal dosage[2,6,7,8,9,10] during diagnostic x-ray procedures which deal with these examinations in females shows a wide range of figures (Tables I and II).

Table I
OVARY DOSE PER EXPOSURE

	Stanford & Vance, '55	Martin, '55	Webster & Merrill, '57 Adult	10 yr. old	3 yr. old	Cooper & Williams, '58	
Abdomen Low KV	200 mr		125 mr	95 mr	46 mr	117 mr	
High KV						74	
Gall Bladder	5.2	90 mr	2-3			9 (rt. ovary)	6 (lt. ovary)
GI—AP	9	150	50	95	48	22	
Oblique	9		70			34	
Lateral			60				
Ba enema—AP	20		190	110	48	154	
Oblique			250				
Lateral			280				
Lumbar spine							
Low (AP	227	50	150	65	50	304	
KV (Lat.	86	150	240	180	110	58*	70**
High (AP	40						
KV (Lat.	16						
Pelvis Low KV	210	300	115	50	50	245	
High KV							
Lat. Lumbosacral	800	500				418*	253**
Hip (AP						236*	52**
(Lat.			410	150	50		
In Pregnancy							
Abdomen, Low KV	260	1500				220	
Abdomen, High KV							
Lat. Abdomen						557*	345**
Lat. Pelvis						1077*	489**

* Ovary nearer source.
** Ovary farther from source.

Table II
OVARY DOSE PER EXAMINATION

	Stanford & Vance, '55 Hosp. A	Hosp. B	Martin, '55	British Medical Research Council, '56	Cooper & Williams, '58 (fluoroscopy dosage not measured)
Abdomen	700 mr	740 mr	203 mr	200 mr	234 mr
Retrograde Pyelography			803	1290	234
I. V. P.	2320	1030	1360		468
Cholecystogram	4.7	0	378	15.6	52
Ba Meal	22.5	18	360	9	241
Ba Enema	12	6	520	20	616
Lumbar Spine				713	780 (ovary nearer source)
Lumbar Spine and Sacro-iliac Joint	1585	1515			
Lumbosacral Joint			1025		
Sacro-iliac Joint				713	722 (ovary nearer source)
Pelvis	294	357	800	210	245
Hip	420	273	440	210	481
Pelvimetry	535	2140		1280	1517

The wide range emphasizes the opportunity for control of ovary dosage by careful selection of equipment and technique and by thoughtful planning of procedures. It also points up the fact that equipment, technique, and procedure are not standardized but are varied by individual radiologists. Finally, it must be remembered that variations in human physique make ovary dose measurements in one patient inapplicable to the next patient. There is, at present, no practical way to determine, as a matter of routine, the exact dosage delivered to each patient as she is examined. Nevertheless, the available data permit a close enough estimate for clinical guidance.

Badly needed at this point is information which will permit a fairly exact idea of how many roentgenographic examinations of females within their productive years are being done which involve direct radiation of the ovaries or indirect radiation from a nearby beam. As a contribution to that end, the number and age distribution of such examinations done in the Department of Radiology of the University of Virginia Hospital in the year 1957 were determined (Table III).

The genetic significance of this radiation is uncertain, but our experience indicates that assuming only essential examinations are performed during pregnancy, the greatest opportunity for reducing ovarian dosage lies in strict evaluation of the need for roentgen investigation of the gastrointestinal tracts, the gallbladders, the lumbar spines of young women, and of repeated roentgenograms in the han-

Table III

DISTRIBUTION OF ROENTGENOGRAPHIC PROCEDURES INVOLVING SIGNIFICANT OVARIAN DOSAGE, 1957

University of Virginia Hospital

	0-5	6-15	16-25	26-35	36-45	Subtotal 46−	45+	Total No.	Estimated average ovary dose (adult) per exam. mr.
Abdomen	31	20	81	89	77	298	394	692	234
KUB	2	8	30	45	48	133	200	333	234
Retra. Py. Cystog.	10	8	14	12	28	72	112	184	234
IVP	12	33	52	89	102	288	241	529	468
GB	1	10	54	107	143	315	394	709	52
Cholang.	1	3	2	4	9	19	18	37	52
GI	15	19	82	143	205	464	551	1015	241
Sm. Bow.	3	5	5	9	12	34	36	70	616
Ba Enema	8	19	36	106	193	362	442	804	616
Pelvim.	0	7	78	21	5	111	0	111	245
Placent.	0	29	213	67	10	319	1	320	777
Salping.	0	0	31	40	6	77	0	77	322
Fetal Det.	0	6	19	26	9	60	0	60	777
Lumbar Sp.	18	34	80	135	161	428	432	860	780
Pelvis, Coccyx	33	18	45	50	68	214	198	412	245
Hip	66	34	24	20	34	178	263	441	481
Lumbar Myel.	0	0	5	13	24	42	36	78	780
Totals	200	253	851	976	1134	3414	3318	6732	

No. of Patients
46− —1976 55%
45+ —1599 45%
Total—3575

Examinations per patient (46−) 1.73

Examinations per patient (45+) 2.07

dling of hip disease in very young girls. In regard to serial studies of hip disease, shields can easily be placed on the abdomen (Fig. 4) over the ovaries

Fig. 4—Roentgenogram of the hips of a female with a gonadal shield in place.

to protect them from the direct beam without obscuring the field of interest. The younger and smaller the subject, the easier it is to place shields accurately, but with care, the ovaries of adults can be shielded in this way. This measure can be used to advantage, not only in the examination of the hip, but whenever shields can be placed over the ovaries without concealing structures which need to be visualized.

OTHER GENETIC HAZARDS

Finally, in trying to evaluate genetic hazards, it is important to keep the whole picture in focus. Most radiation for medical purposes is carefully administered by physicians who are fully aware of the potential dangers, who have analyzed them, and are minimizing them. But ionizing energy is now being used for many non-medical purposes, and the amount of radioactivity in our environment is steadily increasing. Of this people are aware, and the situation is being studied and followed. However, modern medicine threatens the vigor of the race in a way to which little attention is paid. Improved methods of diagnosis, advances in the medical treatment of disease, and the astounding accomplishments of modern surgery are preserving and rehabilitating the bearers of undesirable genes. The physician's concern is for the individual. When he can keep a hemophiliac going by giving transfusions, or prevent a frail child's death from infection by antibiotics or surgically correct a congenital deformity incompatible with life, when he can do any of these and many other things, he does so. Nature, in her cruel way, intended the elimination of those individuals. Modern medicine adds their genes to the genetic pool.

Sir F. MacFarlane Burnet, in the 1958 Cutter Lecture at Harvard Medical School, considered another aspect of this problem in these words: ". . . Perhaps it will eventually be recognized as one of the most significant features of the early 20th century that, as a by-product of more and more powerful therapeutic procedures and the production of chemical substances outside of biological experience, the normal protective barriers keeping mutagenic agents from the internal organs have been more and more frequently penetrated.

"Ionizing radiation is the most important such agent, but others must also be at work. As yet, the only evidence of their presence is the increasing incidence of leukemia.

"This increase may be only a tiny payment for the advantages of a scientific civilization, but it is disquieting. It raises the lurking fear that anything which is increasing the incidence of leukemia may also be breaking through those other barriers which in the past have protected the germ cells from mutagens. . . . We have now recognized the importance of ionizing radiation, and know how we should act in regard to it. On the chemical side, we have hardly begun."

And there are other factors to consider. Ionizing energy is not the only thing that has been proven to increase the rate of mutation. An increase in the temperature of the gonads has the same effect. Someone has figured out that raising the temperature of the human male gonad by 3 degrees doubles the rate of mutation, and that men's trousers raise the temperature of the gonads by an average of 3 degrees. Perhaps the measure being taken by the

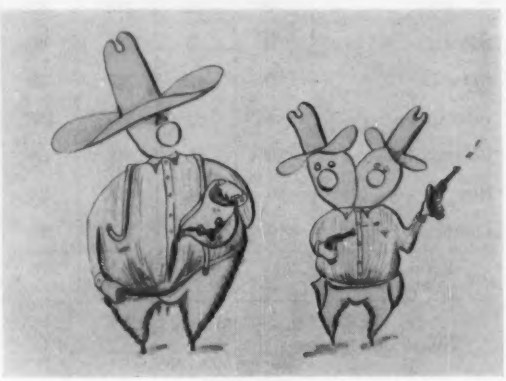

Fig. 5

distraught father in figure 5 is as important as avoiding a few milliroentgens of gonadal radiation —or perhaps men should shift from trousers to kilts.

SUMMARY

1. By taking full advantage of modern equipment, by using careful technique, and by planning examinations thoughtfully, the diagnostic roentgenologist is minimizing radiation dosage.

2. Concern about the genetic hazards involved can be focused on those procedures which require passing the x-ray beam through or near the ovaries of females not past the child bearing age.

3. Ionizing energy used intelligently for medical purposes probably poses only a minor threat to genetic health. Other factors deserve attention.

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Detrimental to Night Driving

The use of any night driving lens or windshield, whether tinted, reflecting or polarizing, has been condemned by the Committee on Industrial Ophthalmology of the American Medical Association's Council on Industrial Health. The committee—whose concern is the functions and diseases of the eye as related to industry—delivered its opinion in the October 17th issue of the A.M.A. Journal, after receiving many inquiries. Its opinion is:

—That a night driving lens or windshield reduces the light transmitted to the eye, and actually makes seeing at night more difficult.

—That the source of night driving glare is the contrast between the headlights of oncoming cars and the darker surroundings. This contrast is not reduced by the use of tinted lenses or windshields. Instead, they really reduce the intensity of illumination from both the headlights and the surroundings. This impairs vision.

—That there is no scientific evidence to support any claim that the use of tinted lenses or windshields improves night vision.

The Use of Phenelzine, an Antidepressant, in General Practice

A Preliminary Report of Two Hundred Cases

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THE INTRODUCTION of true antidepressant compounds has been said to be one of the most significant events to occur in medicine during recent years. The value of these drugs in psychiatry has been repeatedly stressed. However, the role they can play in a general medical practice is no less important. It is conservatively estimated that one-fifth of all patients seen by a general practitioner have no organic disease to account for their symptoms. Another third have symptoms which are completely out of proportion to the organic disease which may be present. Obviously the general practitioner is burdened with a large share of the treatment of patients with psychogenic disorders, and often the management of these patients presents one of the most frustrating problems a physician can encounter.

There has been a widespread use of ataractics in recent years. Although ataractics have a definite place in therapeutics, their use in depressed states is limited, and in many cases even contraindicated. A large number of patients with psychogenic disorders are given ataractics for the relief of anxiety symptoms. Since the anxiety is actually due to depression, the response if any, is transient and occasionally the patient may become even worse. Thus the advent of the true antidepressants represent a great contribution which can be of immeasurable benefit in the management of the depressed, emotionally disturbed, and chronically ill patients so often seen in a general medical practice.

This report is based on a clinical evaluation of Phenelzine, a new antidepressant. Phenelzine is a powerful inhibitor of monoamine oxidase activity.[1] Monoamine oxidase is thought to be responsible for the destruction of adrenergic substances and of serotonin, a chemical mediator, whose function it is to control the pulsation of the oligodendroglia, the cells which supply brain tissue with oxygen and nutrient material.[2,3] The administration of a monoamine oxidase inhibitor such as Phenelzine, will protect adrenergic substances and serotonin, thus increasing the oxygenation and nutrition of the brain cells themselves. The brain can then function more efficiently and can also perform for longer periods without fatigue.

Phenelzine supplied as NARDIL by Warner-Chilcott Laboratories, Morris Plains, N. J.

METHOD AND MATERIAL

Included in this investigation were two hundred patients seen in a general medical practice. Each patient exhibited a variety of symptoms associated with psychogenic disorders. Among the most frequently encountered were: sadness, irritability, apathy, insomnia, chronic fatigue, loss of enjoyment of life, frequent crying spells, loss of appetite, difficulty in swallowing, shortness of breath, palpitations, loss of memory and power of concentration, tremors, dizziness, and numerous gastrointestinal complaints. Seventy-six patients (38%) were men, 124 (62%) were women. The youngest was 17 years of age, and the oldest, 76. However, over 90% were between 40 and 50, the average age of the entire group being 47. No patient in this group was hospitalized, all were seen as part of a daily office practice. With the exception of the housewives and several older retired men, the majority were still working at their various occupations. Also, every patient had been under the observation of the investigator for a minimum of two years, and each had shown little or no improvement following previous therapy.

Of the 200 patients in this group, 96 (48%) had no evidence of an organic disease which could account for their symptoms. One hundred and four patients (52%) had one or more proven organic diseases; however, in every case, the number of their symptoms and the degree of their complaints far outweighed the severity of the disease present, a strong psychosomatic overlay being suggested. Actually, only 11 patients, the majority with cardiovascular disease, were considered to be in the "serious" category.

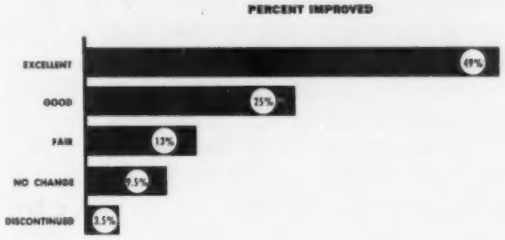
Before this investigation was undertaken, a review was made of all drugs received by the patients during the previous two years. It was found that 150 (75%) had been on some form of drug therapy for the treatment of their psychogenic disorders. Included among these medications were a variety of ataractics, analeptics, sedatives, hematinics, and vitamins. One hundred and four patients had also been receiving one or more drugs for the treatment of their proven organic diseases. Ten (5%) had been on no drugs of any type.

Before Phenelzine was started, all ataractics and sedatives were discontinued. Nine patients with problems of weight control continued to received amphetamine derivatives throughout the entire period of investigation. With these nine exceptions, analeptics were also stopped. The starting dose of Phenelzine for everyone was 15 mg. orally, three times daily. The dosage was to be increased or decreased later according to individual response.

RESULTS

Results were tabulated after each patient had been on Phenelzine for a minimum of two months. The patients' responses were graded according to the degree of relief of emotional symptoms, change in personality and general appearance, and increase of interest and participation in outside activities. Results are listed in Table I.

Table I. **RESULTS WITH PHENELZINE THERAPY**



Since these patients were seen in the office and the majority were working, daily observations were impossible. Therefore, initially it was necessary to depend entirely upon the patients' own evaluations of their response to treatment. From the patients' point of view, improvement, in the majority of cases, was so rapid and impressive that personal evaluation was not difficult. This is particularly significant since these people had not been well for years, and had been almost completely resistant to other therapy. The majority stated that they began to feel better within two or three days after starting Phenelzine and they noticed definite improvement after seven to ten days. Excellent results, when they occurred, were often dramatic and were apparent quite early. In all patients, maximum response was invariably noticed within one month.

Probably the two most frequent remarks made by the patients were "I haven't felt so good in years" and "I have a new lease on life." A large number stated that they were much less irritable and a frequent comment of many women was that they no long felt depressed and ready to cry at the slightest provocation. Other patients mentioned "I'm not tired all the time," "I can do a good day's work now." Many commented on their increased enjoyment of food and their ability to sleep better. Several patients said they were participating in social activities again. Three patients were so improved that they discontinued Phenelzine of their own accord stating that they did not need it any longer.

Changes in the patients' personality and general appearance became increasingly apparent as therapy continued. A decrease in depression and apathy was especially noticeable. Tension appeared to be greatly lessened. Faces were alert and conversations interesting. Patients began to pay more attention to their personal appearance. They were neatly dressed and well groomed and many women were wearing cosmetics again. Many of the usual complaints about gastrointestinal disturbances, "heart trouble", "nervousness", and chronic fatigue had disappeared.

Earlier investigators[4,5,6] have commented on the remarkable effect of monoamine oxidase inhibitors on the anginal syndrome. Five patients receiving Phenelzine had angina pectoris. Since Phenelzine was started, the frequency of attacks in three of the five patients had decreased by approximately 50%, and in a fourth patient anginal attacks have almost completely disappeared. The accompanying pain has also been significantly lessened.

Nine patients with problems of weight control were continued on amphetamine derivatives throughout the evaluation of Phenelzine. Also during this time fifteen patients received antihypertensive drugs containing reserpine. No untoward effects resulting from the combination of Phenelzine and these drugs were observed in any patient.

Placebo studies were done on only nine patients. It is extremely difficult to undertake adequate placebo evaluations in a group of ambulatory private patients particularly when they have psychoneurotic symptoms. Also, one is hesitant to substitute placebos while these patients are responding to treatment so

favorably. Within three to four days after the placebos were substituted, all nine patients began to experience a decrease in their feeling of well-being. Several days later, former complaints began to reappear. After the results of the substitution became obvious, placebos were discontinued and Phenelzine was restarted.

Since improvement was striking and side effects were minimal, no attempt was made to decrease dosage until the termination of the second month, when a gradual tapering off was started. At the present time, 17 patients have discontinued Phenelzine completely with no recurrence of former symptoms, and 114 are being effectively maintained on 15 mg. of Phenelzine a day. Of the remaining 69 patients, 43 are receiving 15 mg. two times a day, 19 have discontinued Phenelzine due to lack of improvement, and seven patients have stopped Phenelzine following the development of side effects.

SIDE EFFECTS

Only seven patients (3.5%) developed side reactions which necessitated the discontinuance of Phenelzine. Two patients became euphoric after taking Phenelzine for approximately one week. Two developed a generalized rash and three patients complained of nausea and headaches.

No adverse hypotensive effects were observed in any patient. The maximum blood pressure drop to occur was 15 mm. this being seen in three patients all of whom were on antihypertensive therapy at the time.

No evidence of toxicity to the liver, kidneys, or blood was noted. This further confirms the earlier findings of Sainz,[7] Thal,[8] and Bailey,[9] that Phenelzine provides a large therapeutic margin of safety, thus enabling its broad application in general practice.

COMMENT

The ideal antidepressant should have no side effects, no liver toxicity, and should specifically affect only the mechanisms of psychic restoration. Phenelzine closely approaches this goal of specificity and freedom from side reactions. The high rate of favorable response, the rapidity of action and safety, make Phenelzine of great potential value to the general practitioner in the management of the "chronically ill" patients with a serious problem of depression, anxiety, and tension.

The following case histories illustrate the response obtained by most patients.

Case I—A 44 year old housewife with symptoms of anxiety referrable to her heart and stomach. She also complained of chronic fatigue, irritability, insomnia and loss of appetite. All examinations were negative for the presence of organic disease. During the previous two years she had received four different tranquilizers and several sedatives, all without benefit. She was then started on Phenelzine 15 mg. three times a day. She began to feel better within several days and a pronounced improvement was noticed within ten days. Tension was greately lessened and the majority of her anxiety symptoms had disappeared. She was sleeping well, eating better and complaints of fatigue were gone. Later she remarked that she was 100% better and that she had not felt so well in ten years. She is now on a maintenance dose of 15 mg. Phenelzine a day. There has been no return of former complaints.

Case II—Ã 49 year old man with a history of angina pectoris of two years' duration. Anginal attacks averaged about ten a week. He had symptoms of tension and anxiety and had complained repeatedly that he was tired all the time and had lost interest in life. He was receiving a long-acting coronary vasodilator, a barbiturate and nitroglycerin when required. He had also taken several tranquilizers but they had been recently discontinued. He was started on Phenelzine 15 mg. three times a day. Within several weeks tension and anxiety were notably decreased and he had begun to make plans for renewed social and recreational activities. Later it became apparent that the frequency of his anginal attacks had been lowered by about 50% and that the pain was significantly lessened. Since Phenelzine was started, no anginal attacks have been precipitated by walking and nitroglycerin requirements have been greatly reduced. Due to the beneficial effect of Phenelzine on his angina pectoris, the maintenance dose of Phenelzine has remained 15 mg. two times a day.

SUMMARY AND CONCLUSIONS

Two hundred patients, seen in a general medical practice, were included in the clinical investigation of Phenelzine for a minimum period of two months. Each patient exhibited a variety of symptoms associated with psychoneurotic disorders.

Ninety-six (48%) had no organic disease to account for their symptoms. One hundred and four patients (52%) did have a proven organic disease, but in all cases, the degree and number of their complaints far outweighed the severity of the organic disease present. All have shown little or no improve-

ment following previous therapy. Eighty-seven per cent responded favorably to Phenelzine. Excellent (49%); Good (25%); Fair (13%). Decrease in apathy, depression and tension was particularly noticeable. The beneficial effects of Phenelzine became apparent within two or three days with maximum improvement invariably occurring in less than one month. Four of the five patients with angina had a significant decrease in both frequency of attacks and severity of pain. No serious side effects were observed and no incompatibility with amphetamines or any antihypertensive drugs was apparent.

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Multiple Pregnancy

By using the machine ordinarily used to measure brain waves, doctors now can detect tiny heart beats in the womb and tell an expectant mother whether she will bear a single child, twins, or triplets. The diagnosis can be made with 100 per cent accuracy between the fifth and seventh months of pregnancy.

Drs. C. A. Novotny, W. K. Hass, and D. A. Callagan of the U.S. Navy Medical Corps reported this finding in the October 17th Journal of the American Medical Association. They conducted electroencephalograph tests on 295 women at the U.S. Naval Hospital, Portsmouth, Va.

Electrodes of the electroencephalograph are pasted to expectant mother's bodies, permitting a systematic search for fetal heart beats. The machine picks up the electrical impulses from the fetal heart and records them on a graph. The number of fetuses is indicated by slightly different heart beats. Three hundred and twenty-one tracings were obtained from the 295 patients by this method. In a vast majority of case studies it also was possible to support the occurrence of fetal death.

Tracings were taken at random between the 11th and 40th week of pregnancy. The 20th through the 27th week was the most favorable period, and 100 per cent accuracy was possible when diagnosing twins or triplets during this period. In all diagnoses during the 20th through 27th week, a 90 per cent degree of accuracy was obtained.

In all cases, between the 11th and 40th week of pregnancy an 81 per cent degree of accuracy of diagnosis was obtained.

The earliest positive diagnosis of twins was made at 16 weeks. An accurate diagnosis of triplets was easily made at 20 weeks. An x-ray made of the same patient was still inconclusive for triplets four weeks later.

Their investigation was prompted by a desire for early diagnosis due to complications of multiple pregnancies; by concern about irradiation hazards of x-ray diagnosis, and by the increasing availability and efficiency of the electroencephalograph.

One Year's Experience in a Cytology Laboratory

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ON AUGUST 1, 1958, the Cytology Laboratory at the Medical College of Virginia obtained the services of a fully trained cyto-technician, skilled in the screening of Papanicolaou smears. Since that date, clinicians have been encouraged to utilize to the fullest extent the services of the Cytology Laboratory. Both ward and clinic patients contributed material which consisted principally of vaginal and cervical smears, sputa, and body fluid exudates. At the end of one year 3897 smears were screened, and the subdivided breakdown of this material can be seen in Table I.

TABLE I

Gynecologic material	3021
Sputa	515
Exudates	212
Miscellaneous	149
Total smears	3897

As we were particularly interested in the results obtained with screening routine gynecologic smears, only these will be further analyzed. Our procedure in the clinics is to obtain a cervical smear on all women over the age of 20 regardless of the patient's complaint. The suggested method of preparation is to insert a pre-moistened, cotton-tipped applicator into the cervical os after exposure of the cervix by means of a non-lubricated speculum. The applicator is rotated in circular fashion and then evenly spread over a clean slide. The slide, before allowing it to dry, is immediately immersed in 95% alcohol.

The results of the 3021 gynecologic smears are tabulated in Table II. Smears which were deemed

TABLE II

(Gynecologic Material Only)

Positive smears	22
Confirmed by biopsy	17
Unconfirmed	4
False positive	1

suspicious or inconclusive were eliminated from the tabulation, in order that no bias as to accuracy would arise from the final biopsy results. Only positive results were therefore evaluated, and a total of 22 smears were so diagnosed. This represents a percentage positive rate of 0.7%.

Confirmation by biopsy of these 22 cases was obtained in 17 patients. There was one false positive case, an error rate of 4.9%. In order to adjudge the final result as a false positive, the following criteria must be met: The patient should have at least a cold knife, wide conization of the cervix, and sufficient microscopic sections must be made to thoroughly eliminate the presence of any neoplastic cells. As can be seen from Table II, four patients were unevaluated as to the presence or absence of cancer of the cervix. Three have had no cervical biopsies, one patient having died before biopsy could be obtained. One patient had only a "4-point" biopsy which is thought to be insufficient to completely rule out the presence of tumor.

In order to further evaluate the usefulness of the Papanicolaou smear it was thought necessary to study the records of the confirmed 17 cases. Since patients with lesions requiring biopsy in any case may have been included in these 17 positive smears, it was necessary to review the physical findings of each patient. Analysis of these findings revealed that nine women had clinically detectable cervical lesions demanding biopsies. A smear made from these cervices would only have corroborated the diagnosis of cancer, and cannot therefore be considered as leading to the early diagnosis of malignancy. The other eight cases with one exception had no demonstrable suspicious findings upon inspection of the cervix, and would not have been ordinarily biopsied. These women were truly asymptomatic, and it can be stated with certainty that the Papanicolaou smear served to pick up a not otherwise detectable case of cervical cancer. The one exception was a recurrent epithelioma of the cervix following radiation therapy. A biopsy of an ulcerative lesion in the vagina was negative, but the cervical smear was positive.

In re-evaluating the cancer detection rate one must subtract the four unconfirmed cases from the total number of smears. In addition the nine clinically positive cases must likewise be eliminated. This leaves a total of 3008 smears of which eight were

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found to be positive. The percentage pick-up rate is therefore 0.26%.

A 0.26% rate of positive smears may seem insignificant when it is realized that considerable effort and expense is expended in a screening program involving the female population. To the individual patient, however, the finding of unsuspected cancer is highly momentous. If one disregards the case of recurrent cervical epithelioma, seven women remain who may ultimately have had an incurable lesion. This, admittedly, is conjectural since only one patient had invasive epithelioma of the cervix as proven by biopsy.

It is not yet definitely established what percentage of patients with in situ epitheliomas evolve into frankly invasive cancer. Undoubtedly some lesions may regress, but those who have had the courage to observe intra-epithelial lesions find the invasive rate in the vicinity of 25% when follow-up studies have been carried out for a minimum of five years.[1]

The authors therefore conclude that routine cervical smears of all women over 20 years of age are definitely worthwhile. Though the percentage rate of positive smears may be small, the method is highly accurate as proven by subsequent biopsies. If diagnosis of cervical epithelioma can be made in the pre-invasive stage, the cure rate of this dreaded disease should be close to 100%, and few women if any need die of malignancy of the cervix.

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Salk Vaccine Reactions

Reported reactions to Salk polio vaccine thus far are so low as to make it unique among immunizing agents, according to Dr. Charles N. Christensen, Indianapolis.

Writing in the October 17th Journal of the American Medical Association, Dr. Christensen, medical division of Lilly Research Laboratories, said there have been only 284 reaction complaints in connection with 184,000,000 doses of Eli Lilly and Company manufactured vaccine. Of these, only 146 could be called possibly significant—complaint rate of 1 per 1,200,000 doses.

One hundred thirty-eight complaints were of burning or stinging pain on injection and were regarded as less significant.

In six instances a clinical picture resembling polio was recorded. Weakness in the extremities not diagnosed as polio was reported three times. In two patients it was transient. In the third case, an adult developed weakness in his left leg after a second injection and more severe weakness after a third injection.

Dr. Christensen stated that evaluation of polio possibly caused by the Salk vaccine is difficult, since some of the millions of persons immunized almost certainly were infected at the time of vaccination—or they acquired infection soon after receiving the vaccine.

He concluded, "It seems likely that cases of poliomyelitis which occurred after injections of the vaccine were coincidental to its use."

Nine cases of encephalitis were reported. In none of these were laboratory data available to identify the cause of the disease, according to the article.

Epidemics and Therapy with Simples in the Early American Colony at Jamestown, Virginia

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THE COLONIZATION at Jamestown was inspired by patriotism, piety and profit. The dawn of a new day came when on May 13, 1607, a small group of colonists, numbering around a hundred and five landed on what they called an island (a misnomer because a marsh and not a stream separated the colony from the mainland) and named the place James City, later becoming Jamestown.

The three ships, the Sarah Constant, the Godspeed, and the Discovery, commanded by Captain Christopher Newport were sent out by the London Company of England which gave them the right to settle land in that part of the American coast known as Virginia.

The colonists could not have settled at a worse place even if they had purposely tried. The saga of the first years is very depressing and dreary. Ships bringing new immigrants and supplies came at intervals, but the struggle against disease, starvation and Indians seemed unending. The days were dark, unsettled and full of vicissitudes. Captain John Smith, whose great abilities made him invaluable to the colonists, swung an ax and taught soft-handed noblemen that to eat, one must labor.

Thin soil, fevers, fires, famine and hostile Indians stalled but did not stop the group of colonists. The English did not expect diseases would ravage the colonists or that epidemics would be rampant. They were thinking more about wounds and such injuries; consequently a physician was not included among the first immigrants. Two "chirurgeons," Will Wilkinson and Thomas Wootton were considered adequate for the colony and during the first 8 months comprised the entire medical staff. Though surgeons were then connected with barbers, there appears nowhere in Virginia records that they were "barber-surgeons".

Usually, physicians came from better families and had attained a higher degree of medical education. Dr. Walter Russell was the first physician to come to the colony at Jamestown and Dr. Lawrence Bohun who came in 1610 with Lord Delaware was second. Due to sickness abounding and a dwindling medical supply, Dr. Bohun experimented with various plants which he used successfully in epidemics of diarrheas and malignant fevers. In the early years at Jamestown before 1618, one thousand and one hundred out of the one thousand and seven hundred immigrants perished. Sixty died the first summer, twenty went the second, and the third summer, seventeen. In 1610 there were only sixty settlers left after three hundred and thirty-eight deaths. Six hundred and sixty-five persons died between 1610 and 1618. After 1618 the incoming settlers increased in number.

The following number of immigrants arrived according to Dr. Wyndham Blanton:

Year	*Immigrants*
1618	1,700
1618-19	840
1619-24	4,749
1624-25	260
Total	7,549

He further states that in February 1625, only one thousand and ninty-five remained from the seven thousand five hundred and forty-nine. From 1635 to 1649 the number rose to fifteen thousand and 1662, there were forty thousand. By 1681 there were fifty six thousand and by the end of the century between sixty thousand and seventy five thousand.

The improved health conditions and the "seasoning period", which newcomers survived, increased the population. The term "seasoning period" was used rather loosely at times. Most of the lately arrived had for various and sundry reasons, "fluxes, fevers, and the bellyache". Due to conditions on ships, diseases and lack of food, unsanitary living conditions, hard work in the sun, to which they were unaccustomed and intempearance, people suffered what was called the "seasoning period" which consisted of fever, dysentery and other common ail-

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ments of that era. If they survived, they were seasoned to resist other illnesses and hardships.

The persons migrating to Virginia encountered diseases of an epidemic nature on shipboard before putting a foot on Virginia soil. The slowly sailing crowded ships were a means of bringing disease and epidemics into Virginia. Since the colonists came from epidemic centers in England and were undernourished aboard ship, these conditions favored the development of food deficiency diseases.

Because of the epidemics and outbreaks of disease, there was practically no growth in population before 1630. Among those listed are: beriberi, scurvy, typhoid, dysentery, plague, yellow fever, malaria, influenza, pneumonia, smallpox, and measles.

"Percy, cataloguing the mortality at Jamestown in 1607, heads the list of 'cruel diseases' with 'Swellings.' His reference probably was to beriberi, sometimes called epidemic dropsy, the twin sister of those other accompaniments of insufficient and unbalanced rations: scurvy and starvation." [1]

George Percy was the youngest of eight sons of the eighth Earl of Northumberland. He was quite a scholar and was president of the Virginia Council for three terms.

Indians were noticed to have had large and swollen bellies which undoubtedly pointed to beriberi, and the settlers were told to avoid mingling.

Due to the fact that the colonists were allotted only half a pint of wheat and barley boiled with water, they suffered because of the lack of Vitamin B, since no eggs, vegetables and fruits were available. The barley and wheat had been aboard the ships for about twenty six weeks, naturally with no preservatives. Worms were abundant and rats did their share of damage.

"Beriberi is often characterized by swelling—the so-called dropsical form. Fluid under the skin and in the body cavities produces a general anasarca and the victim presents a typical swelling. There are also the dry forms, and these might well be portrayed in the 'anatomies' which were described in the streets of Jamestown during this calamitous year, 1607. Castellani calls attention to the fact that acute pernicious types of beriberi occur, 'when the person, without previous illness, suddenly dies.' Some of the early planters are said to have died suddenly and without obvious cause, and this is doubtless the explanation." [2]

Scurvy has been recognized as a disease for a much longer period of time than beriberi and it has affected sea-faring individuals. Vasco da Gama, on his voyage to the Cape of Good Hope, had one hundred of his one hundred and fifty-six men succumb to scurvy. Many colonists had scurvy during the trip over, and again after settling in Virginia. "In 1610 Lord Delaware complained of 'the disease called scurvy; which though in others it might be a sickness of slothfulness yet was in me an effect of weaknesse, which never left me, till I was upon the point to leave the world.' On advice of his physician, Dr. Bohun, he sought a cure in the West Indies, where 'I found help for my health and my sicknesse assuaged, by means of fresh dyet and especially of Oranges and Lemonds, an undoubted remedy and medicine for that disease' ".[3]

Scurvy was considered fatal for the most part and was thought to be the result of idleness. Characteristics of the disease are pain in the joints, lack of interest, lassitude, listlessness and languor. In York and Surry Counties, reports were made concerning deaths from scurvy. The symptoms which usually develop slowly include also anemia, flaccidity of muscles and sometimes a yellowish pallor. When the disease is advanced, hemorrhage occurs internally or externally. The disease itself follows a deficiency of fresh vegetables and fruits, an excess of salt fish or pork, and the use of tainted food or an insufficient amount of food.

The principal effect of bereberi is upon the nervous system and children at birth usually have beriberi when the mother has the disease.

The years of hardship and lack of proper rations conducive to food deficiency diseases contributed to a controversial etiology of diseases since swellings were predominate before the actual disease appeared.

Few contemporary sources of Seventeenth Century Virginia history refer to a disease which might have been malaria. Malaria is not a contagious disease; however, there were mosquitoes in great abundance due to the low, marshy, stagnant and swampy land surrounding the countryside. Reports were made that the mosquito bite was sharper than the sting of the Indian arrow as anyone who has experienced this phenomenon believes even now.

Malaria (ague) is generally accompanied by chills, and, although several references were made to fevers and ague, only five or six authentic cases have been recorded.

"Lord Delaware writes in 1610: 'presently after my arrival in Jamestowne, I was welcomed by a

hot and violent ague, which held mee a time, till by the advice of my Physition, Doctor Lawrence Bohun, (by blood letting), I was recovered.' Strachey declared in 1610 that there were 'many diseases and sicknesses which have happened to our people, who are indeede strangely afflicted with Fluxes and Agues; and every particular season . . . hath his particular infirmities too.' In the absence of the therapeutic test by quinine, which did not come into the colony before the middle of the century, and of modern blood examinations, which were not in practise until 1890, the term 'ague' is vague and might cover a multitude of febrile diseases." [4]

The conclusion manifest is that malaria was not one of the deadly diseases of the colonists. Typhoid was considered to be more lethal than malaria since there is an immunity after an attack of typhoid, but there is a yearly recurrence of malaria.

There were three times during the Seventeenth Century in Virginia that epidemics in the colder months had a high mortality rate. Though contemporary writers do not give a positive opinion, the epidemics were thought to be of the respiratory types: influenza, pneumonia, and pleurisy, which at times have the tendency to reach epidemic proportions. Then, through the ages and even to the present day, influenza rages at its peak during the months of January, February and March. Historical records of Virginia do not show that mortality was comparable to the New England outbreaks which wiped out entire families and almost towns.

The evidence that epidemics of plague were disastrous is certainly conclusive especially since rat infested ships could have carried the disease from London where plague was known to be epidemic. That plague as well as yellow fever and malaria were the principal diseases of the epidemics is supported by the facts and the ideas of that day which have been handed down to us. Reports indicated that four ships of the London Company's fleet were infested in 1609 and a number of passengers died at sea because of plague. Undoubtedly the Virginia colonists were afraid of the plague because a severe penalty was imposed on any one for throwing soap suds in the street. This idea which was brought over from London stated that anyone using soap or anything connected with it in any way would eventually die of the plague. Later on there is a reference to a disease called the plague from which many people died. But, the symptoms justified other diseases: chills, high fever, headache, pain, swelling, and nausea, among others.

Smallpox was first recorded in the West Indies in 1507. The greatest endemic center of smallpox was Africa, and consequently after slaves had been imported, there was an outbreak of the disease. There are few reports of early epidemics recorded in this country, but since the disease was so common in England, practically every one of the colonists was affected in some way, due to the lack of vaccination.

Children are more susceptible to smallpox than adults but there were only a few of them in the colony. This fact plus the number of immunized adults were the reasons for the low incidence of smallpox in the early years of the colony.

The first epidemic occurred in 1667 when a seafaring man arrived at Accomac on the Eastern Shore. He escaped from his isolation and caused an epidemic by spreading the disease to two Indian tribes. There was a high rate of mortality. The "Colonel and Commander of Northampton County", who was acting in place of a health officer, issued the following proclamation to all who were affected with smallpox to allow no one: "to go forth their doors until their full cleansing, that is to say, thirtie dayes after their receiving the sd smallpox, least the sd disease shoulde spreade by infection like the plague of leprosy . . . such as shall no-things notice of the premonition and charge, but beast like shall p'sume to act and doe contrarily, may expect to be severely punished according to the Statute of King James in such cast provided for their contempt herein; God save the King".[5]

In 1696 smallpox was raging so at Jamestown that the Assembly asked for a recess, due to the fact that such a large crowd came to Jamestown during the session of the House and was exposed to the highly contagious and nearly fatal disease.

The first medical book published in America dealt with the disease of smallpox. It was written by Reverend Thomas Thatcher, M.D., and was entitled "Brief Rule to Guide the Common People of New England how to order themselves in the Smallpox or Measles".

Measles and smallpox were often confused. The epidemic which afflicted the colony with several deaths around 1693 may have been smallpox as well as measles. In these days without vaccination smallpox was a common disease.

In 1686 William Byrd wrote to a friend that some Negroes and his little daughter had the smallpox. Several deaths occurred, but for the most part there were not too many fatalities in his circum-

stances. It is interesting to note that smallpox was separated from measles in the Ninth Century.

Dr. Sydenham in the Seventeenth Century in England recognized scarlet fever and wrote extensively on fevers. It is understandable that there was much discussion and difference in opinion before the last decade of the Nineteenth Century with regard to fevers. Actually, a number of the epidemic diseases were accompanied by fever. Many writers who designated the diseases by the outstanding symptoms ("swellings" for beriberi, and the "bloody flux" for dysentery) were familiar with the intermittent fever of malaria. The conclusion was reached that the "burning fevers" of Jamestown in 1607 were not necessarily measles, scarlet fever or smallpox, but of typhoid which was due to individual carriers aboard the vessels and the conditions surrounding them. A high death rate mounted among the early settlers due to "fever". The "fevers" also included yellow fever which is a disease of the tropics and subtropics.

Yellow fever came to Virginia in the bodies of imported mosquitoes. It is believed that calenture and yellow fever are synonymous; calenture has been described as a fever attacking sailors in the tropics affecting them with such delusions that they plunged overboard. Since the voyage from the tropics occupied about two months there was much discussion as to whether patients ill with this disease aboard ship could carry it to the colonies. The decision was made that shipboard cases could not spread this disease after landing. However open buckets in which stagnant water and refuse collected could have been the means of spreading the infection because they were a fertile breeding ground for mosquitoes.

The "Bloody Flux" was a term used in England referring to dysentery. An infectious disease for the colonists might be also associated with food poisoning, which would be attributed to the heat of the summer and food without preservatives. The intestinal disorders producing fevers, diarrhea, cramps and blood were prevalent and rather common summer complaints among the early colonists.

Two important factors in modern recognition of the prevention of epidemics are quarantine and sanitation embracing all matters of hygienic care.

Seventeenth Century methods may have seemed crude, but there did exist wholehearted attempts to prevent disease. The early colonists though unable to combat the situation in some instances did recognize the need and were cognizant of the surrounding causes. Some of these were poor food, crowded quarters, damp and marshy lands, infested ships, and poor drinking water, and the need for quarantine against contagion. Lord Delaware had the earliest record of quarantine put into effect at Kecoughtan.

The epidemic of 1667 of Accomac on the Eastern Shore may have been averted if quarantine imposed upon the sailor who had smallpox had not been broken since he spread the contagion by his contact with the Indian tribes.

The law made by Sir Thomas Gates in 1610, later enforced and including more restrictions by Lord Delaware in 1611, takes into account the stagnant water in the streets, the idea of keeping the drinking water pure, and the placing of latrines a distance from the wells, and other hygienic conditions surrounding living quarters. Instructions were given to raise the bedstead three feet from the ground so the dampness would not affect the health.

Military personnel were made aware of some of the necessary duties assigned to them. They were to attend to the sick and wounded, see that they were well-cared for and kept in clean abodes, hygienic in dress and other conditions, and provided with such remedies as were available.

Due to the epidemics and mortality, there was no increase in population to speak of before 1630. Among the decimating diseases were famine, beriberi, scurvy, typhoid and dysentery and probably plague, yellow fever and malaria. But, after 1630 there was a gradual increase in population. Epidemic diseases which later took their toll of the colonists were pneumonia, influenza, and, maybe, pleurisy, lead poisoning, smallpox and measles.

Migration up the river began and a few small towns developed. The climate was suitable for growing corn, beans, tobacco and other crops which the Indians had proved previously. The Indians became less hostile and the children who were born, lived.

From these roots surrounded by dangers, hardships of starvation, epidemic diseases, hostile Indians and other disintegrating factors, a heritage was born.

Dr. Lawrence Bohun, the second physician who was brought to the colonies, was a highly educated medical man who it was said received his training at Leyden and held a degree in medicine. When Lord Delaware (Thomas West) became ill with what might be considered the first reported case of scurvy in American history, Dr. Bohun inter-

rupted his experiments to attend to the Governor. Dr. Bohun, who is considered to be the first research scientist on these shores, studied the properties of various plants and other resources. He sailed with Lord Delaware bound for the West Indies in March of 1611. Due to irregular winds, they landed in the Azores, and Lord Delaware's health became much improved because the citrus fruit proved to be a remedy for scurvy. Dr. Bohun proably never came to Virginia.

Later, Dr. John Woodall, the medical adviser to Sir Thomas Smith, considered to be a foremost and famous English Surgeon, published his "Surgeon's Mate", the earliest book in which lemon juice was prescribed for scurvy.

The fact was firmly established in 1928 by Szent-Gyorgi that the Vitamin C (ascorbic acid) found in citrus fruits would cure scurvy.

Previously, Dr. Bohun, finding very few medical supplies when he arrived, began to investigate the medicinal properties of plants native to Virginia to combat the sicknesses that were so dominant in the colonies. Some of these were sassafras, rhubarb and gums from various trees. Through his inquisitive mind he found the gum of white poplar and another tree resembling turpentine. It was said that it would make a good balsam and the result was that it would "heale any green wound". Besides the plants and gums from the trees, he also experimented with a white clay which he called Terra Alba Virginensis that was described as "both aromatical and cordiall, and diapharetick' and was recommended in pestilent and malignant fevers." [6]

One of the earliest plants used for medicinal purposes popular in the settlement and also in the Mother Country, having been shipped over in great quantities, was sassafras. The roots became an important medicinal aid and was thought to be a cure for many diseases. It was sold in England under the name of Saloop. Sassafras, a member of the laurel family (to which camphor also belongs) is also called the "ague tree", as a decoction of the bark and roots were supposed to have cured that disease. The bark of the twigs and the pith, rich in mucilage, were used in diseases of the eye and for dysentery. The first letter ever written by the Virginia Council* to the London Company expounds the great abundance of sassafras in the colonies. A pound of sassafras was worth three shillings in England.

Snake root (serpentaria) also known as snakeweed, pelican-flower, sangrel, sangree-root, noted for the stimulant, diaphoretic and tonic values was greatly advocated in the treatment of typhoid and digestive disorders.

Dr. Wyndham B. Blanton, the eminent authority on the history of medicine, states that "Mr. Thomas Glover, who is described as 'an ingenious chirurgeon that hath lived some years in that country,' sent an account of Virginia to the Royal Society in 1676. He notes that 'here groweth the Radex Serpentaria Nigra, which was so much used in the last great pestilence, that the price of it advanced from ten shillings to three pounds sterling a pound.' Beverley, years later wrote, 'There is the snake root so much admired in England as a cordial and being a great antidote in all pestilent disorders', and 'there's the rattlesnake root, to which no remedy was ever yet found comparable; for it effectually cures the bite of a rattlesnake which sometime has been mortal in two minutes. If this medicine be early applied, it presently removes the infection, and in two or three hours restores the patient to as perfect health as if he had never been hurt.' " [7]

Black snakeroot (Black Cohosh-Cimicifuga Racemosa) was regarded by the Indians as a valuable medicinal plant used for the treatment of snake bites and a popular remedy among women. From these meager beginnings, it is now used as an alterative, emmenagogue and sedative.

Thomas Glover also named some other popular simples, such as: dittany, turbith, mechoacon and the fever and ague root. Dittany roots when distilled caused profuse sweating. Fever and ague roots acted as a mild cathartic and emetic.

Senna (Cassia Marylandica) was used widely as a purgative. This is a nauseous, bitter plant that grew wild, around eight feet high with obtuse, oblong leaflets. Rhubarb, tobacco and sarsaparilla, wild cherry bark and ipecac (emetic) were enthusiastically used and advocated.

As in the incidence of many native medicinal plants the early settlers in America learned the virtues of Golden Seal (Hydrastis Canadensis) through the Indians who used the root as a medicine, dye for clothing and stain for their faces. Golden Seal is known by several names, most of them bearing the reference to the color of the root: yellow root, yellow puccoon, orange root, Indian dye, curcuma, wild curcuma, wild tumeric, Indian tumeric, jaundice root and yellow eye, eyebalm, eye root and ground raspberry. The rhizome or rootlets were used in medicine. The root itself was chewed

*The Council in Virginia was a governing body composed of several members.

for relief of sore mouth. The juice was, and is still used as a diuretic, stimulant and escharotic, the powder for blistering, and the infusion for the dropsy. Another use of puccoon was for digestive disorder and affections of the mucous membranes.

The Jamestown weed or Jimson weed (Datura Stramonium) was first used as a sedative and antispasmodic in smaller doses, but in larger doses, as a narcotic and was poisonous. Indians had first used the Jimson weed as a narcotic.

Tobacco was described to have healthful qualities " 'which purgeth superfluous fleame and other grosse humors, openeth all the pores & passages of the body: by which meanes the use thereof, not only preserveth the body from obstructions; but also if any be, so that they have not beene of too long continuance, in short time breaketh them: know not many greevous diseases wherewithall wee in England are oftentime afflcited.' Smokers swore it was an 'antidote to all poisons; that it expelled rheums, sour humours, and obstruction of all kinds, and healed wounds better than St. John's wort. Some doctors were of opinion it would heal gout and the ague, neutralize the effects of drunkeness and remove weariness and hunger". [8]

The plants mentioned are the ones most frequently used in treating diseases and epidemics. Medicines given by the doctors in the early colonies was plain and compounded at home. In the earliest years of the century there were several apothecaries, but by 1621, there was a great scarcity, and it was during the Eighteenth Century that drug stores began to grow. The colonial doctor had a great variety in his treatment of diseases since almost all therapy was purely symptomatic.

The first English colony in America on the shores of Virginia survived in spite of the many years of hardship, diseases and other influences. Early colonial medicine was neither creative nor epoch-making, but courage, independence of action and resourcefulness were borr out of real necessity and made meager beginnings grow into a great tradition.

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Petersburg General Hospital
Petersburg, Virginia

Health Insurance Coverage

Nine out of every ten persons who have health insurance coverage for hospital care also have protection against the cost of surgery, the Health Insurance Institute has reported.

In addition, six out of every ten persons with hospital expense insurance now have regular medical expense insurance, which helps pay for doctor visits for non-surgical care.

In the past decade there has been a sharp rise in the proportion of persons who have improved their health insurance protection by covering themselves against more than one type of medical expense.

In 1948, some 61 million persons had hospital expense insurance. Of this number, 34 million, or 55.8%, also had surgical expenses insurance and 13 million, or 21.1% had regular medical expense insurance.

Ten years later, at the end of 1958, the number of Americans with hospital expense insurance had more than doubled to reach 123 million. Of this sum, 111 million, or 90.6%, also were covered against the costs of surgery, and 75 million, or 61.3%, were protected against regular medical expenses.

Pre-Paid Medical Care....

Edited by
RICHARD J. ACKART, M.D.

Blue Shield Plan Directors

Virginia Medical Service Association, the Blue Shield Plan headquartered in Richmond, each year holds its annual meeting of corporate members (Participating Physicians) at the time and place of the annual meeting of The Medical Society of Virginia. This past October in Roanoke the VMSA members elected five new Directors, and the Medical Society appointed three new Directors of the Blue Shield Board. Later during that month the reconstituted Board held its organizational meeting and elected as Officers of the Association:

President, Dr. William Grossman of Petersburg
Vice-President, Dr. Ernest G. Scott of Lynchburg
Secretary-Treasurer, Dr. McKelden Smith of Staunton
Chairman of the Board, Dr. D. Edward Watkins of Waynesboro

Specialty representation on the new Board can be summarized as follows: Internal Medicine, 6; Surgery, 4; General Practice, 4; one physician each for ALR, Anesthesiology, Gynecology, OALR, Orthopedics, Pathology, Pediatrics, Psychiatry, Radiology, and Urology; and eleven persons representing the subscribing public. The seven-man Executive Committee of the Board includes three internists, two surgeons, one general practitioner, and one pediatrician.

Of the twenty-four physicians on the Board, five are officers of The Medical Society of Virginia.

Concerning geographic representation of the medical profession, Richmond has six physician-Directors; Charlottesville and Norfolk, three each; Newport News and Petersburg, two each; and eight other localities, one each.

A listing of the Directors of Virginia Medical Service Association is presented below.

* * * * * * * * * * * * * * * * * * *

*Walter P. Adams, M.D., Internal Medicine, Norfolk.
Mr. H. A. Brower, Personnel Superintendent, E. I. du Pont de Nemours & Co., Waynesboro
*Russell V. Buxton, M.D., General Surgery, Newport News.
F. Ashton Carmines, M.D., Orthopedic Surgery, Newport News.
George J. Carroll, M.D., Pathology, Suffolk.
George Cooper, Jr., M.D., Radiology, Charlottesville.
Mr. R. B. Crawford, President, Kilkare Laundry, Farmville.
Mr. John E. Damerel, Director of Personnel, City of Richmond, Richmond.
Frank D. Daniel, M.D., General Practice, Charlottesville.
T. Dewey Davis, M.D., Internal Medicine, Richmond.
William Grossman, M.D., Pediatrics, Petersburg.
*Randolph H. Hoge, M.D., Gynecology, Richmond.
Guy W. Horsley, M.D., General Surgery, Richmond.
Mr. M. A. Hubbard, Executive Secretary, Virginia Farm Bureau Federation, Richmond.
Mr. William H. King, Attorney, Richmond.
Mr. William Meacham, Associate Editor, Norfolk-Virginia Pilot, Norfolk.
*Cary N. Moon, Jr., M.D., Otolaryngology, Charlottesville.
*Claude A. Nunnally, M.D., Internal Medicine, Fredericksburg.
*Wilkins J. Ozlin, M.D., Urology, South Hill.
H. Grant Preston, M.D., Ophthalmology and Otolaryngology, Harrisonburg.
*Benjamin W. Rawles, Jr., M.D., General Surgery, Richmond.
Mr. George W. Robinson, Tabb, Brockenbrough & Ragland, Richmond.
*William C. Salley, M.D., Internal Medicine, Norfolk.
*John R. Saunders, M.D., Psychiatry, Richmond.
Ernest G. Scott, M.D., Internal Medicine, Lynchburg.

*Directors selected by The Medical Society of Virginia.

McKelden Smith, M.D., Internal Medicine, Staunton.

Harry B. Taylor, Jr., M.D., General Practice, Norfolk.

Mr. E. Hudson Titmus, Jr., President, Titmus Optical Company, Petersburg.

Mrs. Ben Wailes, Dean of Women, Sweet Briar College, Sweet Briar.

Thomas Walker, M.D., Anesthesiology, Richmond.

Mr. Herbert G. Wall, Procter & Gamble (retired), Norfolk.

*D. Edward Watkins, M.D., General Surgery, Waynesboro.

Mr. Morris W. Whitaker, Secretary, Allen-Morrison Sign Company, Lynchburg.

*Fletcher J. Wright, Jr., M.D., General Practice, Petersburg.

*Julian H. Yeatman, M.D., General Practice, Fork Union.

*Directors selected by The Medical Society of Virginia.

"Cluster Headache"

Repeated daily attacks of migraine headaches are actually a specific type of migraine—"cluster headache."

Also called "Harris's migraine" after the man who first systematically described the condition, "cluster headache" occurs after weeks of freedom from pain. A bout usually lasts for weeks, with the patient having at least one attack daily.

Other characteristics of the condition, as described in an editorial in the October 31st Journal of the American Medical Medical Association, are:

—The patient is more often a man than a woman (between two and four to one) and between the ages of 30 and 50 years, although first attacks have been reported in patients as young as 11 and as old as 59.

—The attacks of pain are intolerable, but their duration is relatively short—minutes to an hour. The constant boring or throbbing pain is at the outer side of the eye. It may spread to the remainder of the cheek, the forehead, the scalp and occasionally, the neck.

—The pain usually affects the same side repeatedly, in fact, the same spot. Most attacks occur on the right side.

—In contrast to the more usual migraine where the patient prefers to lie down and pull the covers over his head, with cluster headaches, he cannot recline and usually must pace. There seems to be a relationship between the pain and the muscular activity that it causes.

—The attacks tend to occur at the same time of day or night, most frequently between 2 and 3 a.m.

—The bouts recur irregularly and then may cease after occurring for years.

—Most patients have previously had the more classic form of migraine, which is replaced by the Harris form.

Preventive treatment consists of regular injections of ergotamine tartrate, a drug commonly used in oral form for the treatment of regular migraine. The patient is taught to give himself the injections daily for five days in each week. The two free days allow the patient to determine whether the bout of pain has ceased.

Another interesting fact about this "variant of the galaxy that is migraine" is that the patient cannot tolerate alcoholic drinks during a bout, presumably because of the alcohol's dilating effect on the blood vessels of the head.

Public Health....

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

The First Rabid Bat Discovered in Virgina

The existence of rabies infection in bats in the United States was unknown until June 1953, when the first reported laboratory diagnosis was made by the Tampa regional laboratory of the Florida State Board of Health. Negri bodies were found to be present on microscopic examination of a bat brain in routine diagnostic procedures. Rabies infection was confirmed by inoculation of mice with the bat brain. The virus isolated by the Florida Board of Health was sent to the Virus and Rickettsia Laboratory of the Public Health Service Communicable Disease Center, Atlanta, where it was confirmed as rabies virus by neutralization and by complement fixation tests.

This led to the study of live free-living bats in Florida and a number of bats were collected from various sources for the purpose. The evidence obtained showed that rabies infection in Florida bats is well established and widely disseminated in the free-living species dispersed in nature.

Since that time bat rabies virus has been reported as having been isolated from insectivorous bats in quite a number of the states of the United States, from the east coast to the west and from the northern border to the southern, and the total now stands at twenty-two.

The first case of rabies in a human being in the United States which could unquestionably be attributed to the bite of a known rabid bat occurred in Butte County, California, in October 1958. There have been approximately seventy-five postively diagnosed cases of bat rabies in the United States which were reported as involved in the biting of human beings.

Bats are the only mammals with the power of true flight. They are now nearly worldwide in distribution. Their wings consist of the fingers of the hand greatly elongated to support the membranous wing surface. They navigate by means of echo location, which has been called radar and sonar, and they are enabled by this to readily avoid objects, even in total darkness. Most bats are insect eaters and some have been estimated to consume from one-half to their full weight in insects in a day. They are helpful in holding down the insect population and in controlling an overabundance of them.

Prior to the recognition of the infection of bats with rabies, they were considered to present a public health problem from several stand points. Bat ectoparasites (ticks, mites, and fleas) may attack man, particularly when bats are infesting a house. Bats have been known to be associated with several communicable diseases which, with one or two exceptions, are not common in this country. Histoplasmosis, a systemic fungus disease of man, may be contracted by inhaling dusty bat manure containing Histoplasma capsulatum. The bats, themselves, do not transmit histoplasmosis but their dusty manure is a suitable medium for the development of airborne spore of the fungus. Certain fungus infections of the human skin are associated with bat caves and bats possibly serve as significant reservoirs of the fungi.

Since bat rabies was first reported and wide publicity was given to the fact that human infection with rabies can result from this source, a few bats have been sent to the Laboratory of the Virginia State Department of Health for examination for this disease. It was not until a short time ago that rabies was identified in one of these.

On Saturday, September 26, 1959, some boys in a residential section of Henrico County found a dead bat. One of them handled the bat rather freely. His well-informed mother on hearing of the episode, recovered the bat and kept it refrigerated until the following Monday, when she took it to the Laboratory of the State Department of Health for examination for rabies. Direct smears were made from the brain and were reported as being "Suspicious for Rabies" but a clear-cut diagnosis could not be made from that study. Mice were then inoculated, the mouse being highly susceptible to this virus, and eleven days later one of them died. Smears from this animal's brain were examined and Negri bodies were extensively demonstrated. Fortunately, the boy who had handled the bat had been started on anti-rabies treatment as soon as the first report was made that

the bat's brain was highly suspicious for rabies.

This leads to warnings to be cautious:

Animals found dead from unknown causes should not be handled with bare hands.

Never try to administer to what may appear to be a wounded or crippled bat. It would not be in the neighborhood of human beings in the day time if it were healthy and there is nothing you could do for it if it were crippled.

Inform your children of these dangers and advise them to adopt the policy of "hands off".

Protect your pet animals with anti-rabies vaccination and in doing so you protect yourself from possible exposure.

The possibility that bats can transmit rabies to man is present but the probability is not great. The bats we are exposed to are not carnivorous and do not like the presence of man. It is more probable that they may be a reservoir for maintaining rabies in wildlife. By the simple expediency of anti-rabies vaccination for dogs and other pets, we can protect them from infection from these sources and thereby prevent transmission to humans with whom they live in such intimate contact.

It is interesting to note that the West Virginia State Department of Health recently reported that the first case of bat rabies in that State was confirmed in August by animal inoculation tests. In that case a 7-year-old boy was bitten when he picked up a bat after it had fallen in a swimming pool. The boy was given anti-rabies treatment.

MONTHLY REPORT OF BUREAU OF COMMUNICABLE DISEASE CONTROL

	Oct. 1959	Oct. 1958	Jan.-Oct. 1959	Jan.-Oct. 1958
Brucellosis	7	1	27	17
Diphtheria	2	10	10	24
Hepatitis	69	22	414	243
Measles	37	123	14570	21480
Meningococcal Infections	6	7	73	77
Meningitis (Other)	69	33	366	232
Poliomyelitis	50	27	270	125
Rabies (In Animals)	21	6	150	227
Rocky Mountain Spotted Fever	4	0	37	32
Streptococcal Infections	371	367	7449	5869
Tularemia	0	0	16	28
Typhoid	10	4	24	38

Hypnosis Cures Hiccups

A single hypnotic suggestion successfully cured an eight-day case of hiccups in a man recovering from a heart attack, two Philadelphia doctors have reported. A serious complication of myocardial infarction, hiccups produce extreme exhaustion in the patient if they are prolonged, Drs. Gordon Bendersky and Martin Baren said.

A 55-year-old man developed hiccups 22 days after he had suffered a heart attack. After eight days of almost constant hiccupping, during which all the standard treatment methods were tried, the patient was given one hypnotic suggestion that the hiccups would disappear.

"This proved to be successful. Except for two hiccups which occurred several hours later, the hiccups failed to return. The remainder of his convalescence was uneventful," the doctors wrote in the September Archives of Internal Medicine, published by the American Medical Association.

No other case of successful termination of hiccups following a single hypnotic suggestion has been reported.

While the general use of hypnosis for eliminating psychosomatic manifestations cannot be endorsed and may be highly dangerous, the doctors believe the seriousness of the hiccups and the failure of all other methods warranted its use.

Dr. Bendersky is associated with the Hahnemann Medical College and Hospital and Dr. Baren with Children's Hospital, Philadelphia.

Mental Health....

CYRIL R. MILL, Ph.D.

Toward an Understanding of Clinical Psychology

Psychologists are understandably concerned that their professional discipline be understood and accepted by others. Recent studies show that the psychologist is still regarded by many persons in the medical profession as a "mental tester".[1] It is true that one of the chief contributions which can be made by a clinical psychologist (and there are five or six other sub-specialties in the field such as industrial psychology, experimental psychology, social psychology, educational psychology, and military psychology) is the skill and special techniques which he can bring to the problem of diagnosis of emotional maladjustments and learning problems. But this should not lead to the neglect of several other areas in which some psychologists can provide distinct service, such as consultation, training, research, administration, and individual and group psychotherapy. These and other services, in addition to the diagnostic function, are being provided in the clinics and hospitals of the Department of Mental Hygiene and Hospitals by persons trained in the field of psychology.

A few illustrations might show some of the varied activities in which psychologists in this Department are presently engaged:

CONSULTATION

Community groups and social agencies have called upon psychologists for consultation regarding problems of juvenile delinquency, to assist with the formation of a local Family Service Society, and for other problems related to mental health. Schools use psychological consultation for case conferences, workshops for parents on child development, and for the recommendations they can give in the operation of special classes, sheltered workshops, and facilities for cerebral palsied children. Physicians interested in research have used psychological consultation to sharpen their hypotheses and plan their experimental design. Psychologists are coming to be seen as a source of information and consultation by an increasing number of civic groups, and are serving on boards of many social agencies.

TRAINING AND EDUCATION

Many psychologists enjoy teaching and affiliate themselves with universities or extension programs wherever possible. Training others to a better understanding of emotional maladjustments and what to do about them is a part of many psychologists' daily job. They may be called upon to speak to a one-shot affair, as at a P.T.A. meeting, in a workshop lasting eight to ten hours spaced out over several weeks, or in a more traditional course covering a semester. Many types of students are receiving this training, including psychiatric aides, policemen, housewives, nurses, medical students, teachers, and lawyers and ministers. Several psychologists in Virginia are now trained to use some of the newer instructional methods of group dynamics which have proven to be more effective than the traditional lecture method.

RESEARCH

The current survey of research in mental health in the South which is being conducted by the Southern Regional Education Board has pointed up the strong role of psychologists in research. Out of a total response to the survey of 576 individuals in the southern states, 325 held the Ph.D. degree, as compared to 128 who held the M.D. Most of these Ph.D's are psychologists, although not all are clinical psychologists. In Virginia the last few years have seen an increase in research activity both in the number of projects completed and the total number of psychologists engaged in research. Projects are presently underway on several psychological tests of intelligence and personality, on factors related to reading problems and under-achievement, and on the effects of various drugs on perception, cognition, and intellectual functioning.

ADMINISTRATION

No one, these days, comes into the professional fields of mental health with specific training in administration. Yet everyone is aware of the de-

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Approved for publication by Commissioner, Dept. Mental Hygiene and Hospitals.

sirability of good administrative practices for organizing an efficient and happy unit. Very often physicians are burdened with administrative duties for which they are not prepared or which they do not enjoy. In some clinics either the psychologist or the psychiatric social worker is delegated many administrative duties to everyone's satisfaction. In hospitals the psychologists are also found serving on committees and taking some of the administrative burden which does not entail the making of medical decisions. More of this could be done, and medical administrators could well consider ways and means of utilizing the administrative potential that exists among their psychological staffs.

INDIVIDUAL AND GROUP PSYCHOTHERAPY

In some of Virginia's hospitals more patient-hours of psychotherapy are provided by psychologists than by the medically trained staff. Group psychotherapy is being offered to patients just before discharge, and to the aged with gratifying results. Group and individual psychotherapy with children in hospitals as well as play therapy is largely the result of interest of psychologists in this field.

In some of the mental health clinics, all members of the team engage in psychotherapy, with group psychotherapy making this service available to greater numbers of people.

DIAGNOSIS

The role of the psychologist in diagnosis should not be omitted in this discussion. The unique contribution made by the psychologist to an understanding of a case is through his use of tests. Usually, in clinical procedure, different facets of the patient's problems of adjustment are contributed by each member of the team. Different diagnostic recommendations occasionally are offered by each team member but this is a reflection on no one, arising as it does from the fact that varying aspects are focused upon through the social history, through the psychiatric interview or neurological examination, and the psychological examination. The discussion of these differences provides for stimulating staff meetings and a clear understanding of the case dynamics. The final diagnostic labelling is a psychiatric responsibility.

The practice of referring all cases for a psychological examination is disappearing. Such a "shotgun" means of referral is wasteful of valuable time, and as referring sources gain an understanding of the kinds of questions best answered by making a psychological referral, wiser referrals result.

Harlow and Salzman[2] *suggest that a request for a psychological evaluation of personality functioning would be appropriate under the following circumstances:*

1. For evaluating possible underlying pathology, e.g., the suspicion of what appears to be neurotic symptomatology masking a schizophrenic process.
2. For evaluating the relative strength of different pathological trends in a patient, e.g., whether a depression observed clinically is primary or incidental to other pathology also present clinically.
3. For obtaining information about a patient which may be unobtainable through interview, e.g., the "hyper-repressive" patient.
4. For investigating the etiology of a symptom, e.g., the meaning of a conversion reaction.
5. For evaluating the advisability of initiating, continuing, or terminating hospitalization, e.g., when there is a question concerning the possibility of further decompensation.
6. For planning a psychotherapeutic approach, e.g., for deciding between supportive or interpretive therapy, e.g., by alerting the therapist to the forms of resistance and defense likely to be employed.
7. For an evaluation of change as a result of the therapeutic process.

Appraisal of intellectual functioning is appropriate:

1. For making a differential diagnosis, e.g., for legally declaring a patient a mental defective.
2. For making a disposition of a case, e.g., whether a patient has the intellectual capacity to utilize certain types of psychotherapy.
3. For evaluating the relationship between a patient's current functioning to his potential abilities, e.g., when a person failing in school is felt to have the capacity to perform more adequately.
4. When there is a question of disturbed thought processes, e.g., when schizophrenia is suspected.
5. For evaluating impairment of, or deterioration in, ability to perform cognitive functions, e.g., when organic involvement is suspected.

It is probable that within the next ten years the American Psychological Association will set the Ph.D. degree as the minimum essential for psychology as a profession. In clinical psychology, the Ph.D. means at least three years of graduate study, plus a one-year internship, plus research training in the preparation of a doctoral dissertation. In the near future, the Commonwealth of Virginia

must review its standards for the employment of psychologists and adjust the pay scale to a level appropriate for psychologists who are fully trained.

Each year sees more effort by psychologists to improve the quality and quantity of their services. The first step toward this end in any local situation is to establish satisfactory role-relationships based upon understanding of the other fellow and his job. This seems elementary, but a recent study revealed that in some hospitals in Virginia, physicians new to the psychiatric setting did not know the difference between a psychologist and a social worker! As working relationships develop over a period of time, and each member learns more about how to ask the right question of the other, medical and psychiatric personnel find that they are deriving greater and more valuable services from their psychological colleagues.

FOOTNOTES

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"Madison Avenue Poem"

THE COCKTAIL HOUR—

(with apologies to Henry W. Longfellow)

WILLIAM S. SLOAN, M.D.
Petersburg, Virginia

Between the dark and the daylight,
When our genius is beginning to sour—
Comes a pause in the day's occupation
That is known as "the cocktail hour".

I hear it in the chambers above me
Amid the patter on the street
The sound of a bottle being opened
For "whiskies sour" and sweet!

From my table I see in the half-light
A maze of incredible stares,
"Dutch" courage, loud laughing, escapism
And tosspots with dishevelled hairs.

"D Ts" seen here in the making
(Snakes crawling all over the chair)
Later, try to escape—they surround you
They seem to be everywhere!

At these "pseudo-Suave" get to-gethers
One meets the oddest of types
Off-beats, beatniks, strong tipplers
Strange moods with a hundred gripes.

The "appetite" devours them like kisses
Compulsion like arms that entwine
Craving surmounts would be "ceasers",
In this "wine tower on the Rhine"!

So a word of advice to the stubborn
Who don't wait for five o'clock*
You're the one who will bear close watching
Or join the alcoholic flock!

*No gentleman drinks before five P.M.

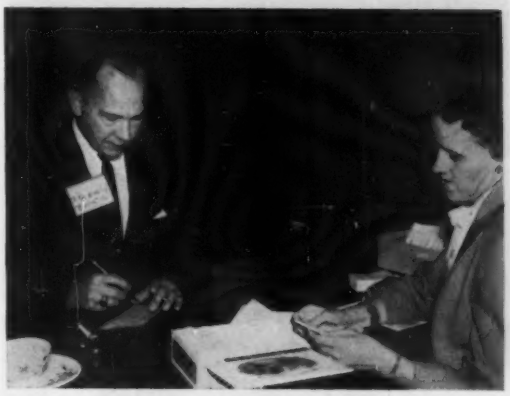
34 Franklin Street
Petersburg, Virginia

"Seens" at the Annual Meeting in Roanoke

Dr. A. A. Creecy has 'em shined up!

Mrs. Walter Porter—Incoming President of the Auxiliary and Mrs. W. H. Kaufman, General Chairman.

Politics—Dr. Paul Pearson and Dr. Ira Hancock.



Signin' in—Dr. Julian Q. Early.

The Boss—Dr. Adams—and His Better Half.

Head Table at the Banquet.

Past Presidents—Drs. King, Archer, Hamner, Caudill, Harrell, Mulholland, Martin, Hundley, Adams, Hagood, Robertson and the Left Arm of Dr. Bates.

Two Hundred Years of Practice—Dr. P. E. Thornhill, C. L. Harrell, J. W. Robertson and W. E. Vest.

Oh those Fashions! Dr. Bates and Dr. Adams approve.

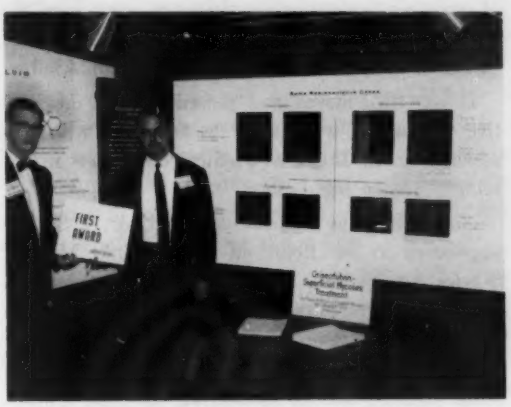
Dr. Adams Turns Over Gavel to Dr. Barker.

The $64,000 Question—Dr. Holcombe Hurt Ponders.

Reference Committee.

Dr. Robert Keeling and Dr. Hugh Stokes confer with Dr. Courtland Davis.

Now Let's See—What Have I Forgotten? Dr. Robert Hutcheson—General Chairman.



First Prize—Drs. Trice and Murrell.

Coffee Served by Medical Assistants to Dr. Davis and Dr. Michael.

The Medical Society of Virginia . . . .

Council Minutes

The meeting of the Council of The Medical Society of Virginia was called to order by Dr. Walter P. Adams, President, at 1:00 P.M. on Sunday, October 4, 1959, at the Hotel Roanoke. Attending were Dr. Walter P. Adams, Dr. Allen Barker, Dr. Harry C. Bates, Jr., Dr. Guy W. Horsley, Dr. Harry J. Warthen, Dr. Mack I. Shanholtz, Dr. John T. T. Hundley, Dr. Paul Hogg, Dr. K. K. Wallace, Dr. Benjamin W. Rawles, Jr., Dr. Fletcher J. Wright, Jr., Dr. Louis P. Bailey, Dr. Alexander McCausland, Dr. Byrd S. Leavell, Dr. Harold W. Miller, Dr. James P. Williams and Dr. Richard E. Palmer. Also in attendance were Dr. Vincent W. Archer, Delegate to the AMA; Dr. W. Linwood Ball, Delegate to the AMA; Dr. James M. Peery, Second Vice-President; Dr. McLemore Birdsong, Third Vice-President; Dr. Russell Cox, President of the State Board of Medical Examiners, and Dr. K. D. Graves, Secretary of the State Board of Medical Examiners.

Dr. Adams opened the meeting with a brief message of welcome and then introduced Mr. W. L. Painter, Director, Division of General Welfare, State Department of Welfare and Institutions. Mr. Painter stated, that in his opinion, a need existed for improved liaison between his Department and physicians at the local level. He went on to say that consideration is being given to the possibility of financing the cost of hospital care of public assistance recipients from funds appropriated for the several categories of assistance. Such payments would then be subject to federal reimbursement.

During the ensuing discussion, it was brought out that the time has come for physicians to decide just how far the profession should go as far as the use of federal funds is concerned. The dangers of asking for federal funds were pointed out and there was some feeling that medical and hospital care should be covered almost entirely by the localities.

A motion was then offered which would have Council approve the vendor method of payment for medical care and would favor the formation of local advisory committees to the Department of Welfare. There was no second. As a matter of information, the annual report of the Society's Liaison Committee to the Department of Public Welfare was read. Another motion was then introduced asking that Council approve the Committee report. It was brought out in the ensuing discussion that this report would come before the House for approval. There was no second.

The report of the Finance Committee and the proposed budget for 1959-60 were presented by Dr. Porter. The budget, as adopted, is included in the minutes of the First Session of the House of Delegates.

Dr. Porter then advised Council of his Committee's request that some committee be appointed to study possible retirement plans for staff personnel. It was moved and passed that the President appoint a committee to study such plans and report to Council at its earliest convenience.

The President then introduced Dr. Russell Cox, President of the State Board of Medical Examiners, who acquainted Council with some of the problems being encountered by the Board. He explained the advantages of using examination questions prepared by the National Board, but pointed out that such examinations had brought additional expense. The Board must pay $10.00 for each candidate taking the exam and, consequently, it is in the position of needing additional revenue. It was the feeling of Dr. Cox and other members of the Board that a freer hand is needed in establishing fees for the examination and also in determining qualifications. It was his hope that the Legislative Committee could meet with the Board and consider possible legislation designed to meet the Board's current needs.

A question was raised concerning the possibility of granting licenses to physicians retiring from the Armed Forces. It was brought out that legislation would be needed to permit licensure of this kind.

It was then moved and passed that the Legislative Committee, with power to act, meet with and assist the State Board of Medical Examiners in obtaining needed legislation.

Nominations were then considered for 12 Society appointees to the Board of the Virginia Medical Service Association. It was moved and passed that the President be authorized to make these appointments.

Council was asked to once again approve the Virginia Medical Service Association as fiscal administrator of the Medicare Program. It was brought out that the Association had done a very fine job

in this capacity. It was moved and passed that the requested approval be granted.

A special "senior citizen" contract, proposed by the Virginia Medical Service Association, was discussed at length. Although some fear was expressed that the reduced fee schedule might pose some problems, it was generally agreed that the good points of the contract far outweighed any possible shortcomings. The contract was to be presented to the House in order that hearings could be held by the Reference Committee.

Dr. John C. Watson, Chairman, American Medical Education Foundation Committee, was then introduced for the purpose of presenting a special report to Council. He stated that his Committee had encountered some difficulty in interesting component societies in the importance of stressing the Foundation at the local level. Only 13 of the local societies appointed local AMEF chairmen. Dr. Watson went on to say that a very small percentage of the Society's membership were contributing directly to the Foundation. He further stated that during a meeting of the Committee Chairmen in Richmond, it was decided that Council should be approached on the advisability of a compulsory assessment.

After considerable discussion, it was moved that Council do everything possible to promote the American Medical Education Foundation, but that no compulsory assessment be levied. There was some feeling that perhaps a voluntary assessment might be the answer and the motion was amended to include some notice of the AMEF on the Society's regular statements for dues. It was then moved and passed that the motion be tabled.

A resolution on Social Security from the Lynchburg Academy of Medicine was then presented to the Council for information only. It was brought out that a similar resolution would be introduced in the House of Delegates that evening.

Next on the agenda was a resolution from the Virginia Pharmaceutical Association pointing out the need of better liaison between pharmacists and physicians. It recommended that local liaison committees be established to bring about a better working relationship of the two groups.

It was then moved and passed that the Society appoint an advisory committee of three to work with medical and allied organizations and that local medical societies be urged to do the same.

A successor to the late Mr. Robert C. Duval, Jr., Attorney for the Society, was discussed and it was decided that the selection should be left to the President and the Executive Committee. A motion to this effect was adopted.

Dr. Hundley then moved that a resolution on Mr. Duval be written for publication in the Virginia Medical Monthly. The resolution would also be sent to the immediate family. The motion was adopted.

Council was advised that the Society was encountering a great deal of difficulty in arranging its meetings only two years ahead. With more and more organizations holding meetings of various kinds, it appears that meetings should be arranged at least three, and possibly four, years ahead if desirable dates are to be obtained. It was moved and passed that the Executive Committee be requested to select the dates and locations of annual meetings up to four years in advance.

A question was raised as to whether or not the Society should consider holding another meeting in the District of Columbia. It was pointed out that there does exist a feeling among some in the District that The Medical Society of Virginia should not schedule a meeting in Washington so close to that of their own Society. It was brought out that most physicians in Northern Virginia would like for the Society to meet in Washington every few years and that the wishes of these members should be considered. It was decided that the Executive Committee should take these factors into consideration.

A letter from Dr. John L. Thornton, Richmond, was then read concerning the need for financial assistance for the Northeastern Clearing House of the American Association of Blood Banks. Dr. Thornton pointed out that the Clearing House has been operating at a deficit and has been able to continue only by obtaining a loan from the Medical Society of New York. Medical societies in five states have contributed $900 each. It was the consensus of Council that the request be referred to the Medical Service Committee for consideration and such recommendation as it might feel necessary.

Considered next was a request from the Committee on Maternal Health that serious consideration be given to a bill, recently passed by the South Dakota Legislature, which provides legislative safeguards for committees obtaining information for statistical purposes. The Committee on Maternal Health believed that similar legislation is needed in Virginia. A motion was then adopted which called for the Legislative Committee, with power to act, to study the South Dakota bill and seek the enact-

ment of similar legislation by the Virginia General Assembly.

Dr. Wallace suggested that the Legislative Committee might well consider a number of laws adopted in other states to control the so-called "quack practitioner".

Next on the agenda was the question of whether or not the Society should continue to elect a "General Practitioner of the Year". Council was reminded that the question had been raised last year in the House of Delegates and had been tabled until 1959. It was reported that some members believed that the award sometimes did more harm than good. A motion was then offered which would refer the question to the Virginia Academy of General Practice. However, it was quickly brought out that the Academy had, only a few years ago, referred the matter to the Society and asked that it be relieved of any responsibility. The motion was lost for want of a second. A new motion was then introduced which would have the award discontinued after this year. The motion was adopted.

There being no further business, the meeting was adjourned.

House of Delegates

First Session

The House of Delegates of The Medical Society of Virginia met in the Ballroom of the Hotel Roanoke, Roanoke, Virginia, on Sunday, October 4, 1959, and was called to order at 8:00 P.M. by Dr. Walter P. Adams, President.

Dr. Adams requested a report from the Credentials Committee, and Dr. Ira L. Hancock, Committee Chairman, reported a quorum present (132 Delegates, representing 37 component societies). It was announced that the Prince William County Medical Society had been chartered that afternoon.

The President then introduced Dr. John T. T. Hundley, Speaker of the House. This was Dr. Hundley's first meeting since his serious accident of a year ago.

The Speaker presented Mrs. Charles A. Easley, President of the Woman's Auxiliary to The Medical Society of Virginia and Mrs. Walter A. Porter, President-Elect of the Auxiliary.

The Society's Delegates to meetings of allied organizations were then recognized. Dr. Barker had represented the Society at the annual meeting of the Virginia Pharmaceutical Association and Dr. Hamner had once again served as Delegate to the annual meeting of the Virginia Academy of General Practice.

The Speaker next recognized visiting delegates from allied organizations. Dr. W. T. McAfee, Roanoke, represented the Virginia Dental Association and Mr. Charles Green, Bedford, represented the Virginia Pharmaceutical Association. Mr. Greene, in addressing the House, cited the need for a closer relationship between physicians and pharmacists. He pointed out that patients often raise questions concerning the cost of drugs and that physicians should know the answers.

Dr. Walter A. Porter, Chairman of the Finance Committee, was recognized for the purpose of presenting the proposed budget for fiscal 1959-60 as recommended by Council. It was moved that the report of the Committee be accepted and that the budget be approved. The motion carried.

The budget, as approved, follows:

BUDGET 1959-1960

Executive Office	
Salaries	$29,635.00
Telephone & Telegrams	1,550.00
Postage	1,250.00
Stationery & Supplies	1,200.00
Office Equipment	2,000.00
Building Maintenance	4,000.00
Building Repairs	100.00
Convention Expense	1,000.00
Council & Committees	2,000.00
Executive Assistant	200.00
Delegates to A.M.A.	1,600.00
President's Expense	1,000.00
Travel Expense	1,500.00
Virginia Medical Monthly	40,000.00
Scientific Exhibits	2,500.00
Legal Expense	2,500.00
Walter Reed Commission	500.00
Woman's Auxiliary	100.00
Membership Dues—Affiliated Organizations	215.00
Editor—Virginia Medical Monthly	600.00
Special Appropriations:	
Virginia Council on Health & Medical Care	3,000.00
American Medical Education Foundation	3,000.00
National Society on Medical Research	150.00
Rural Health Committee	500.00
Student AMA	250.00
Contribution to AMA June Meeting	500.00
Social Security Taxes	500.00
Miscellaneous	600.00
Special Project on Medical Education (2 Representatives to University of Michigan to study Intern & Residency Program	350.00
Public Relations:	
Conference Expenses	1,000.00
Radio & Press	500.00
Literature & Bulletins	200.00
Miscellaneous Projects	100.00
Total	$104,100.00

Dr. Hundley reported on the afternoon meeting of the Council, and acquainted the House with a proposed "senior citizen" contract, a resolution from the Virginia Pharmaceutical Association, proposed legislation to provide legislative safeguards for committees obtaining information for statistical purposes, the proposed resolution on Mr. Duval, problems surrounding future annual meetings and the General Practitioner of the Year Award.

The Speaker then introduced Mrs. Louise Griener, Secretary, Virginia Academy of General Practice; Dr. John Winebrenner, Regional Administrator, United Mine Workers Welfare Fund; Dr. K. D. Graves, Secretary of the State Board of Medical Examiners, and Mr. Richard Nelson, Field Representative, American Medical Association.

Delegates were then appointed from each Congressional District to assist in the election of a nominating committee. These delegates met with the delegations from their districts during a short intermission which followed.

The Committee on Nominations was announced as follows:

1st District: A. A. Creecy, M.D.
2nd District: Russell Cox, M.D.
3rd District: Thomas W. Murrell, Jr., M.D.
4th District: Charles Scott, M.D.
5th District: Louis P. Bailey, M.D.
6th District: H. H. Hurt, M.D.
7th District: Frank A. Tappan, M.D.
8th District: Paul C. Pearson, M.D.
9th District: J. Glen Cox, M.D.
10th District: John T. Hazel, M.D.

Mr. Nelson, AMA, then presented a filmstrip and recorded talk by Dr. Louis Orr on the Forand Bill. Delegates were urged to have their societies adopt resolutions of opposition to the Forand Bill, to personally meet with their congressmen, interest their friends in writing their congressmen, and take an active part in the campaign to solve the aging problem.

Dr. Archer, who represented the Society at a special AMA meeting in St. Louis, asked the Delegates to devote ten per cent of their reading time to problems of a socio-economic nature and to make every effort to become better acquainted with their congressmen.

Dr. Allen Barker, the Society's second representative at St. Louis, brought out the fact that the Forand Bill is definitely misleading and that it cannot solve the problem of the indigent.

The following committee reports, published in the September, 1959, issue of the Virginia Medical Monthly, were received. Executive Secretary-Treasurer; Delegates to AMA; Editorial Board; Membership; Public Relations; Mediation; House; Walter Reed Commission; Medical Education; Advisory to Woman's Auxiliary; Medicare Advisory; Principles and Policies; Conservation of Sight; Mental Health; To confer with the United Mine Workers Welfare Fund; Federal Medical Services; National Legislative; Insurance; Cancer; Liaison with Department of Public Welfare; Rehabilitation; National Emergency Medical Service; Aging and Chronically Ill; American Medical Education Foundation, and Radiation Hazards (referred to Reference Committee).

The report of the Judicial Committee, containing proposed amendments to the Constitution and By-Laws, was considered and some opposition was voiced to making AMA Delegates voting members of the Council. After considerable discussion, the House rejected the proposed amendment to Article VI, of the Constitution which would have granted AMA Delegates full membership in the Council.

There was some confusion concerning the proposed amendments to the By-Laws which were intended, among other things, to establish three definite classifications of membership and to clarify honorary active and honorary associate membership. Because of the confusion, it was moved and passed that Article I, Section 1, of the By-Laws be amended to include the words "honorary active" and "honorary associate". This would establish and spell out five definite classifications of membership.

Dr. Salley recommended that Virginia's Delegates to the AMA be made full members of the House of Delegates. During the discussion, the question was raised as to whether our Delegates did not already qualify as officers of the AMA. It was ruled that Delegates were not considered as officers of that association.

A motion was then passed calling for the Judicial Committee to prepare such amendments to the Constitution and By-Laws as are necessary to make the Society's AMA Delegates full members of the House of Delegates.

The report of the Committee on Preventive Medicine, containing a proposed bill requiring polio immunization for school admittance, was then discussed at length. The Speaker pointed out that the recommendations of the Committee would be considered by the Reference Committee the following

day and that any debate should be withheld until that time.

In discussing the report of the Committee on Traffic Safety, Dr. Fletcher Woodward pointed out that a sub-committee of the Virginia Advisory Legislative Council has already made a number of recommendations concerning the drinking driver—including the widely discussed "implied consent" clause. The report was referred to the Reference Committee.

A supplemental report from the Rehabilitation Committee was presented by Dr. Hoover. The report strongly advocated passage of "second injury" legislation.

Dr. Hoover then introduced a resolution nominating Dr. Leroy Smith, Richmond, for the award made annually by the President's Committee on the Employment of the Physically Handicapped. The resolution was automatically referred to the Reference Committee.

A supplemental report was submitted by the Committee on Maternal Health, with the request that it be substituted for the report published in the September issue of the Virginia Medical Monthly. The report specifically recommended legislation to safeguard committees obtaining information for statistical purposes.

Dr. Savage then presented the report of the Committee on Medical Service which also contained a recommendation that the Society reaffirm its stand on "second injury" legislation.

A report was received from the Committee to Confer with the State Board of Nurse Examiners and Dr. Mapp introduced three resolutions which were referred to the Reference Committee.

A short progress report on the work of the Legislative Committee was offered by Dr. Elliott. He told of the Committee's work with the State Board of Medical Examiners and explained the problems being encountered by the Committee with reference to "second injury" legislation.

The annual report and recommendations of the Committee on Alcoholism was summarized by Dr. Sloan and referred to the Reference Committee.

The last report offered was that of the Committee on Specific and Chronic Diseases which contained recommendations concerning unoccupied beds at Catawba and Blue Ridge Sanatoriums and expansion of the Russell County Clinic program.

The Speaker called for new business and Dr. Hurt introduced a resolution, sponsored by the Lynchburg Academy of Medicine, on the Social Security program. The resolution was referred to the Reference Committee.

A resolution from the Southwestern Virginia Medical Society was then introduced by Dr. Stark. The resolution stressed the possibility of high school football injuries and called for physicians to be in attendance at all games. The resolution was referred to the Reference Committee.

Dr. Brittain then raised a question concerning the proper seating of Delegates by District and cited the need of future clarification of the matter by the Judicial Committee.

There being no further business, the meeting was adjourned.

Second Session

The Second Session of the House of Delegates of The Medical Society of Virginia was called to order by Dr. John T. T. Hundley, Speaker, at 4:00 P.M., Tuesday, October 6, 1959, in the Virginia Room of the Hotel Roanoke.

A quorum was reported by Dr. Ira L. Hancock, Chairman of the Credentials Committee.

Dr. Hundley then called for a report from the Committee on Nominations. Dr. Murrell, reporting for the Committee, submitted the following nominations:

President-Elect: Guy W. Horsley, M.D., Richmond

First Vice-President: Russell Buxton, M.D. Newport News

Second Vice-President: Reverdy H. Jones, Jr., M.D., Roanoke

Third Vice-President: Mallory S. Andrews, M.D., Norfolk

Dr. Buxton requested that his name be withdrawn and nominated Dr. Robert S. Hutcheson, Jr., Roanoke, in his stead. Dr. Jones also regretfully declined the nomination for Second Vice-President and nominated Dr. Buxton in his place. It was then moved that nominations be closed and that a unanimous ballot be cast. The motion was seconded and adopted.

Nominations were then received for the office of Executive Secretary-Treasurer. Robert I. Howard was nominated and subsequently elected.

Received next were the following nominations for Councilor from the First, Third, Fifth, Seventh, and Ninth Districts:

1st District: Paul Hogg, M.D., Newport News

3rd District: Thomas W. Murrell, Jr., M.D., Richmond

5th District: William N. Thompson, M.D., Stuart
7th District: Dennis P. McCarty, M.D., Front Royal
9th District: W. Fredric Delp, M.D., Pulaski

The following nominations from the Sixth District for the State Board of Medical Examiners were received:

Charles M. Irving, M.D.
J. E. Haynesworth, M.D.
K. D. Graves, M.D.

These nominations will be submitted to the Governor for his consideration.

Dr. Hundley requested nominations for two delegates and two alternates to the American Medical Association. The terms of Dr. W. Linwood Ball, and Dr. Allen Barker expire on December 31. Those nominated were Dr. Ball, Dr. Barker, Dr. Salley, Dr. Hundley, and Dr. Buxton. Dr. Hundley then requested that his name be withdrawn from consideration. The vote was by ballot and both Dr. Ball and Dr. Barker were re-elected. Dr. Salley and Dr. Buxton were designated as alternates.

The Speaker then presented the report of the Reference Committee. It was the recommendation of the Committee that the "senior citizen" contract, proposed by the Virginia Medical Service Association, be approved. It was moved and adopted that the recommendation be accepted.

It was the Committee's recommendation that the resolution from the Virginia Pharmaceutical Association be approved and that an advisory committee of three be appointed to work with medical and allied organizations. It was also recommended that component societies be requested to take similar action. The Committee's recommendation was adopted.

Approved next was the Committee's recommendation that legislation be sought which would provide legislative safeguards for committees obtaining information for statistical purposes. It was further recommended that the Legislative Committee, with power to act, study the bill recently adopted in South Dakota and seek the enactment of similar legislation by the Virginia General Assembly. The Committee believed that Section 4 should be deleted from the South Dakota bill and the following words added to Section 1: "except such information as the Commissioner of Health and the State Health Department deem necessary".

Considered next were the recommendations of the Committee with reference to proposed amendments to the By-Laws. It was the Committee's recommendation that the proposed amendments to Article I, Section 1, 3, and 4, and the proposed amendment to Article II, Section 3, be approved. The purposes of the first three amendments are to establish five classifications of membership, to clarify the status of courtesy members and to clarify honorary active and honorary associate membership. The purpose of the amendment to Article II is to clarify the dues exemption status of those members elected to honorary active or honorary associate membership. The recommendations of the Committee were adopted and the By-Laws will be amended accordingly.

The Committee then recommended that the following resolution be adopted:

BE IT RESOLVED THAT The Medical Society of Virginia urge that all recommended immunizations be administered as early in life as possible; that the profession administer such immunizations to its patients at a reasonable fee or if a patient is unable to pay, without fee; that the private physicians cooperate with public health efforts in encouraging immunizations and in conducting free immunization clinics; that the local medical societies take every possible action to support immunizations;

AND FURTHER BELIEVING THAT passage of a law requiring specific immunizations previous to entrance to school will tend to produce delay in administration of needed immunizations;

IT IS FURTHER RESOLVED THAT proposed laws to accomplish such purpose not be advocated at this time.

The resolution was adopted.

The House then approved the Committee's recommendation that the 6 recommendations contained in the report of the Committee on Medical Service be approved. (The report of the Committee is published in a special section immediately following these minutes). The Committee also called attention to the fact that both the Medical Service Committee and Rehabilitation Committee had requested the Society to advocate and reaffirm its previous position regarding passage of "second injury" legislation.

The Committee recommended that no action be taken at this time on the report of the Traffic Safety Committee, but that the Committee be urged to continue its study of this very pressing problem. The recommendation was approved.

The House unanimously approved the recommendation that the following resolution be adopted:

BE IT RESOLVED that we, The Medical Society of Virginia, recommend to the President's Commit-

tee on Employment of the Physically Handicapped, Dr. Leroy Smith of Richmond, Virginia, for his outstanding efforts expended in promoting equal opportunity in employment for the physically handicapped.

In considering three recommendations by the Committee to Confer with the State Board of Nurse Examiners, the Reference Committee approved the suggestion "that The Medical Society of Virginia recommend that Virginia physicians' assistants join the American Association of Medical Assistants which has been approved by the American Medical Association as having merit for them and which is not a threat to practical and professional nursing." This recommendation was approved.

The Committee recommended that the Editorial Board consider the suggestion that an occasional page in the Virginia Medical Monthly be utilized by the Virginia Board of Nurse Examiners for the purpose of enlisting the aid of Virginia physicians in the training and recruitment of nurses. The material used would be subject to approval of the Editors of the Virginia Medical Monthly and the Committee to Confer with the State Board of Nurse Examiners. The recommendation was adopted.

The House then heard a recommendation that the Legislative Committee, with power to act, be authorized to meet with and assist the State Board of Medical Examiners in obtaining legislation which would provide the Board with a freer hand in establishing the qualifications of applicants and fees for examinations. The recommendation was adopted.

Considered next was the report of the Committee on Alcoholism. The report was accepted and it was suggested that the Program Committee for 1960 be made aware of the Committee's wish to provide a panel discussion at the next annual meeting.

The House approved the Committee recommendation that "subject to the consent and cooperation of the local medical societies, further expansion of the program used in Russell County be urged". (This program is covered thoroughly in the April, 1958, issue of the Virginia Medical Monthly).

With reference to the resolution introduced by the Lynchburg Academy of Medicine on Social Security, the Reference Committee proposed that the following resolution be substituted:

BE IT RESOLVED THAT following publication in the Virginia Medical Monthly of the panel discussion on Social Security, The Medical Society of Virginia will conduct a poll of the members. The ballot will state that the extension of Social Security coverage to physicians would be compulsory and irrevocable as long as Social Security remains national policy.

The results of the poll will be binding on the Delegates to the AMA if there is majority vote pro or con of the membership of The Medical Society of Virginia.

Ballots will be signed and names checked against The Medical Society of Virginia roll.

The questionnaire would read as follows:

1. Are you a member of The Medical Society of Virginia?
2. Are you now in active practice?
3. Do you favor compulsory Social Security coverage of physicians? Yes_____ No_____

Valid only if signed.

SIGNED:_____

There followed considerable discussion on the Reference Committee substitute resolution and an amendment was offered regarding the binding results to include the words "a majority of the practicing registered physicians in Virginia". The motion was seconded and after further discussion a motion was adopted closing debate. This motion carried. The proposed amendment was then lost. Another amendment was offered which would have the proposed questionnaire ascertain whether or not the physician was under Social Security. Following a motion to close debate, the amendment was lost. The House then voted on the resolution proposed by the Reference Committee and it was adopted.

The following resolution, proposed by the Southwestern Virginia Medical Society and recommended by the Reference Committee was adopted:

In that there is a need for cooperation between school officials and the physicians of Virginia, and in that there is a great possibility for minor and even major injuries while playing high school football,

BE IT RESOLVED that the local medical societies of Virginia endeavor in all possible ways to see that a physician be in attendance at all football games between high schools of this State, and

BE IT FURTHER RESOLVED that a copy of this resolution be sent all local medical societies of Virginia.

Considered next was the Committee recommendation that Article V, Section 8 of the By-Laws be referred to the Judicial Committee for study and necessary action. The recommendation was approved.

The Committee then recommended that the House

adopt the recommendation of the Committee on Radiation Hazards that the Society do everything possible to seek enactment of a proposed bill (refer to committee reports published in the September issue of the Virginia Medical Monthly) by the General Assembly of Virginia. This bill would declare the public policy of the State with respect to radiation and radioactive materials. It would define certain terms and would create a state radiation control agency and a committee to assist such agency. The bill would further prescribe the powers and duties of such agency and committee, prohibit certain practices and provide penalties for violations. The Committee's recommendations were adopted.

The House, by standing vote, unanimously adopted the following expression of regret on the death of Mr. Robert C. Duval, Jr.:

The untimely death of Robert C. Duval, Jr., was a severe shock to his friends. No group was more distressed or oppressed with a sense of deep loss than the membership of The Medical Society of Virginia. For a number of years he had served as Attorney for the Society, but he was much more than a capable and valued legal advisor—he was a friend, and counselor. Thorough in his study, patient in his explanation, wise in his counsel, he guided The Medical Society of Virginia through confusing paths of obscurity to legislative and public opinion accomplishments of great and lasting value.

We miss him personally and we miss his guiding counsel. He cannot be replaced in our regard.

To his family and associates, we express our deep sympathy, and share with them a feeling of profound personal loss.

Considered next was the recommendation of the Committee that the title of the Liaison Committee to the Department of Public Welfare be changed to that of Advisory Committee. The recommendation was approved.

Approved was a recommendation that the Society accept an invitation to participate in the 1961-65 commemoration of the Civil War. The Society would cooperate in the portrayal of the medical aspects of the conflict.

Dr. Hundley then covered a number of suggested changes in the Maternity Hospital Laws and advised the House that the Committee recommended that the proposed changes be referred to the Bureau of Licensure of Hospitals and Nursing Homes (State Department of Health) for study and guidance.

An election was held to name the "General Practitioner of the Year in Virginia" and the honor went to Dr. Montie Lewis Rea.

It had previously been decided that, after this year, the election of a "General Practitioner of the Year" would be discontinued.

Dr. Salley introduced the following resolution which was adopted unanimously:

BE IT RESOLVED THAT the House of Delegates of The Medical Society of Virginia commend our host committee of the Roanoke Academy of Medicine for its efforts in connection with the 112th Annual Meeting, and

BE IT FURTHER RESOLVED THAT the House extend its sincere thanks to the Staff and employees of the Hotel Roanoke for their part in making this meeting one of the most pleasant and successful in our memory.

Dr. Hundley was asked to relinquish the platform to Dr. Walter P. Adams, President. The following resolution was then adopted by a rising vote:

RESOLVED, that this House express its pleasure at the recovery of the Speaker and express to him its deep appreciation for his most efficient work at this session by a rising vote.

There being no further business, the meeting was adjourned.

ROBERT I. HOWARD
Secretary

APPROVED: WALTER P. ADAMS, M.D.,
President

Fifty Year Club Certificates—1959

Sidney Elsom Bray, M.D., Newport News
William Wilson Samuel Butler, M.D., Roanoke
William Lee Cosby, M.D., Painter
Mercer Waller Crafford, M.D., Lee Hall
Sylvester P. Gardner, M.D., Gate City
William Lawrence Gatewood, M.D., Richmond
Charles Lydon Harrell, M.D., Norfolk
James Morrison Hutcheson, M.D., Richmond
Thomas Edward Jones, M.D., Charlottesville
Thomas E. Patteson, M.D., Dillwyn
Joel Cutchins Rawls, M.D., Franklin
John William Robertson, Onancock
Hugh W. Smeltzer, M.D., Greendale
James Waller Smith, M.D., Hayes
Paige Earl Thornhill, M.D., Norfolk
Thomas Jefferson Tudor, M.D., Norton
Walter Edward Vest, M.D., Huntington, W. Va.
William Robert Weisiger, M.D., Richmond

Members Whose Deaths Have Been Reported Since 1958 Annual Meeting

Waller C. Akers, M.D.
Sheppard Kellam Ames, M.D.
George E. Barksdale, M.D.

Howson Wallace Blanton, M.D.
Altamont Hart Bracey, M.D.
William Edward Bray, M.D.
Meade Stith Brent, M.D.
Edwin Wheeler Buckingham, M.D.
Isaac Wickham Cunningham, M.D.
Thomas Welch Dew, M.D.
Austin Ingram Dodson, M.D.
Courtney Edmond, M.D.
Linwood Farley, M.D.
George Lee Fosque, M.D.
Mervin Wilbur Glover, M.D.
Lewis Clay Haley, M.D.
Merritt Wood Healy, M.D.
Nicholas Flood Hix, M.D.
John Gill Holland, M.D.
John Williams Hooker, M.D.
Frank Hopkins, M.D.
Harry Gilman Hudnall, M.D.
Henry Vernon Johnston, M.D.
Delbert Vine Kechele, M.D.
Prentice Kinser, Jr., M.D.
D. Hunter Marrow, M.D.
Aaron W. Martin, M.D.
Howard Russell Masters, M.D.
Lewis C. McNeer, M.D.
Jerome Natt, M.D.
Cullen Pitt, M.D.
William Ribble Pretlow, M.D.
Charles Loren Ransom, M.D.
Benjamin Watkins Rawles, M.D.
Thomas Allen Ray, M.D.
Emmett Francis Reese, M.D.
Ernest Clay Shull, M.D.
Thomas Eldridge Stanley, M.D.
Robert Milton Taliaferro, M.D.
John Bolling Vaiden, M.D.
Porter Paisley Vinson, M.D.
William Harvey Whitmore, M.D.
John Franklin Williams, M.D.

Legislative

Only one matter was referred to your Committee for action during the year. This, of course, can be attributed to the fact that this was between regular sessions of the General Assembly. A special session, however, was called to deal with problems on public education.

It was this special session which prompted the State Board of Medical Examiners to seek the assistance of the Legislative Committee in amending the State Code in such manner as to make it possible for the Board to utilize examinations prepared by the National Board of Medical Examiners. The one obstacle which had to be removed was that calling for such examinations to be filed in the Office of the Secretary of the Commonwealth. This was frowned upon by the National Board, since it considered such a requirement as a danger to the security it believes necessary.

The General Assembly did adopt legislation amending the Code in such way that the examinations could be filed with the Secretary of the State Board of Medical Examiners rather than with the Secretary of the Commonwealth.

It might be well to mention that members of the Committee have discussed its role in supporting the Society's stand on "second injury" legislation. There are a number of problems which must be solved before any positive action can be taken. Undoubtedly the committee will give this matter serious consideration at its next formal meeting.

W. C. Elliott, M.D., *Chairman*

Specific and Chronic Diseases

This committee was left with a problem from this same committee of last year. The problem of whether or not to recommend to the Legislature that the unoccupied beds at Catawba and Blue Ridge Sanitoriums be used for non-tubercular patients from the indigent group in Virginia. The Public Health members of the Committee feel that this utilization of unoccupied beds is definitely worthwhile, but they agree that we might afford to wait awhile before making such a decision. The practicing physicians of the committee who voted, with one exception, did not feel that the Society should request the Legislature to authorize such use for these unoccupied beds at the present time. In lieu of this, the opinion of the entire committee was that The Medical Society of Virginia should approve, subject to the consent and cooperation of the local medical society, further expansion of the program used in Russell County through the general medical clinic in the locality which is staffed by the local physicians with the help of the Public Health Department.

William R. Jordan, M.D., *Chairman*

Alcoholism

The problem of alcohol consumption and of alcoholism continues to plague our civilization, and whether or not we admit it publicly, offers one of the biggest challenges to the medical profession today. It is at least the fourth greatest health problem in our nation.

This is hardly surprising if we but stop to realize that "the cocktail party" is synonymous in the mind of the average American with "the social hour". As long as the cocktail party is the trademark of our times (the *sine qua non* for climbing the social ladder), the combination of frequent exposure and social pressure will tend to break the thin line between social drinking and alcoholism. Our "glass crutches" are more fragile than we realize. Besides being the "trademark" of our day and age, the cocktail party may also be the onus, since drinking is thereby sanctioned in the mind of the average middle-class American. This runs the gamut of beer to champagne, beer having been said to be the poor man's symphony concerts —not that beer drinking is limited to the poor. Practically all major league baseball teams have beer sponsors.

The New York Times has suggested that vodka is the Soviet secret weapon. Professional people, including bankers, brokers, business men, lawyers, and physicians are said to be day-time partakers of this insidious beverage, smug in the assurance that the breath will not betray such indiscretion. Vodka sales have "sputniked" all over the country. "It leaves you Breathless!"

San Francisco enjoys the reputation of being the most fascinating city in the United States. At the same time, it holds the questionable distinction of having the highest rate of alcoholism. Sipping a cocktail at the "Top of the Mark" is emblematic of a visit to that City.

It is, indeed, unfortunate that the social trademark of our times is something that tends toward negation of responsibility. All this should serve to indicate that the reason there are so many "alcohol-flavored" accidents is because there is so much "alcohol-flavored" thinking. (We jokingly classify city dwellers as "urbanites, suburbanites and bourbonites.")

The drinking driver is the greatest unguided missile of all times!

Certain it is that the alcoholic ranks are being filled daily from all walks of life. Unless we of the medical persuasion, can be "persuaded" that this is to a large extent our problem, (since it is a medical one), no appreciable dent can be made in this bumper of defiance against reality. This work has to be done at local levels; some high-echelon planning, to be sure, but mainly how to enlist the aid of the family physicians in every community is the problem. Psychiatrists are inadequate in number and disposition to handle the problem alone. A firm but sympathetic attitude is needed by physicians and other interested personnel.

At our committee meeting this year, we decided to attempt to awaken each doctor in The Medical Society of Virginia to the enormity of the problem, and ask him to accept the challenge.

Accordingly, we make the following recommendations:

1. That there be cooperation at all local levels.
2. That we work with ministers, priests and rabbis, who are becoming increasingly cooperative as they become increasingly aware of the problem of alcoholism.
3. That alcohol education for key citizens of the community, for example, civic clubs, and men's clubs (in churches) be made available.
4. That there be cooperation with Alcoholics Anonymous. This is the best facility to help the alcoholic find himself. Ninety-four per cent of physicians encourage this association with A.A.
5. That we counsel with alcoholics and their families.
6. That we refer alcoholics to our DASR unit and out-patient clinics—Richmond, Norfolk, Abingdon, Charlottesville, Roanoke and Fairfax County. Virginia is one of twenty-four states who provide rehabilitation services for alcoholics.
7. That we provide a panel discussion at our annual Virginia State Medical Society meeting as soon as we can persuade our program or steering committee of the importance of such a work-shop.

WILLIAM S. SLOAN, M.D., *Chairman*
JAMES ASA SHIELD, M.D.
RUSSELL G. MCALLISTER, M.D.
EBBE C. HOFF, M.D.
WILLIAM F. GIBBS, M.D.

To Confer With State Board of Nurse Examiners

During the year, the Committee has attempted to cooperate with the State Board of Nurse Examiners, the efforts of both groups being directed at increasing the number and quality of nurses. To this end, The Medical Society of Virginia was induced to contribute approximately two hundred dollars to a brochure which was very well done and gave all pertinent facts in regard to nurse education in Virginia in one pamphlet. This brochure has been well received and the nurses feel that it has been most helpful and have expressed their appreciation to the Medical Society for this cooperation, which enables its recruiting.

The Board reports that it has twenty-seven training programs in force in the State and that the number of nurses who entered training in 1959 was nine hundred and ninety-nine as opposed to nine hundred and sixty-three in 1958. As matters stand, it is felt that the programs are training as many student nurses as the instructing nursing personnel can presently tend to. It is recognized that more nurses are needed in all categories and efforts are being directed to this end. It is of interest to note that nurse registrations in the State are on the increase and that less nurses are leaving Virginia than were leaving the State several years ago.

This Committee conferred with the Nurses Board on 8-19-59 specifically as regards the efforts of an organization known as "The American Registry of Doctors' Nurses" to solicit membership among all assistants in Virginia's doctors' offices, the endorsement of the doctor being required. The matter was thoroughly studied and it was concluded that this organization tends to damage the recruitment program for R.N.'s and practical nurses and that it has no merit for the doctors' assistants involved. This Committee therefore recommends most strongly to The Medical Society of Virginia that its members refuse to endorse their assistants for membership in the American Registry of Doctors' Nurses.

This Committee discussed the Forand Bill with the State Board of Nurse Examiners in view of the fact that the American Nurses Association, which represents nurses generally in the same way as does the AMA represent physicians, gave its endorsement to this bill at the Congressional hearing in July 1959. This Committee urged the Virginia nurses to reconsider the matter and to allow The Medical Society of Virginia to supply speakers on the subject or educational matter, if the nurses cared to have the matter discussed at the Virginia Nurse Association meeting, in the event they care to reconsider the matter. The implication was that the Virginia nurses had had little to do with the endorsement of the Forand Bill.

The Committee offered its services to the Nurses Board in whatever way it may help in the recruitment of nurses for training and in eliciting the cooperation of physicians in general in the training of nurses. It was suggested that utilization of an occasional page in the Virginia Medical Monthly to this end might prove helpful. Thus, this Committee urges The Medical Society of Virginia to permit this.

Your Committee feels that a spirit of real cooperation is developing by these joint efforts directed at better patient-care, better nursing and thus better medicine.

JOHN R. MAPP, M.D., *Chairman*
JOHN P. LYNCH, M.D.
ANDREW D. HART, M.D.
JAMES M. MOSS, M.D.
H. H. HURT, M.D.

Maternal Health

The Committee on Maternal Health met on March 11, and July 25, 1959, with eleven of the thirteen members present at each meeting.

This Committee has as its primary function the detailed study of every maternal death occurring in Virginia and this study is carried out at each meeting from information tabulated by the attending physician, the hospital and relatives. All such information and identification is completely anonymous to the members of the Committee and after a careful study the primary cause of death, the classification as to maternal, medical or surgical death and the preventability or non-preventability determined if possible. Three meetings annually are required to complete this detailed survey.

For several years a sub-committee has studied the problem of training, licensing and the supervision of midwives in Virginia and after much deliberation presented to the entire Committee in July their recommendations relating to this important problem. These recommendations will be forwarded to The Medical Society of Virginia for the enactment of the proposed necessary legislation.

A second sub-committee has also studied carefully the problem of licensing Sub-Standard Hospitals for maternity care and delivery and their recommendations were also approved by the Committee and forwarded to The Medical Society of Virginia.

At the first meeting, the Committee was confronted with the problem of the availability of maternal death records and classifications to the physicians, to hospitals, to legal counsel for relatives and even to Courts. This Committee requests that the attorney for The Medical Society of Virginia formulate the necessary legislation requiring that all information secured in a maternal death be privileged, statistical and unavailable for any court action as practiced in many other states. The Committee did agree that the reports of maternal deaths would be made available to the attending physician on written request to the State Department of Health.

The sub-committee on Maternal Death Classification has recommended that the terminology and classification as recommended by the American Medical Association in the "Guide for Maternal Death Studies 1957" be used in the study in classification of all maternal deaths in this State.

The Committee approved the following motion: "As a result of the study of maternal deaths in Virginia, the Committee agreed that certain of these deaths might have been prevented if a policy were followed whereby internes and residents would consult with the attending physician concerning any major obstetrical procedure before any treatment or operation be instituted. The Committee, therefore, recommends that the observance of such a policy be strictly adhered to throughout the state."

The Program Committee of the State Medical Society will be notified that the Committee on Maternal Health is available for the 1960 Program of the Society if desired.

President-Elect Allen Barker, M.D., of The Medical Society of Virginia was informed by the Chairman, at Dr. Barker's request, that in his opinion all of the present members of this Committee should be retained during the coming year because of their knowledge and experience handling the problems of the Committee.

The membership of this Committee has shown clearly their deep interest in the promotion of better obstetrical care in the State of Virginia by their continued attendance to three meetings annually with the necessary loss of much time from their practice, and their sincerity of effort is hereby commended.

EUGENE S. GROSECLOSE, M.D., *Chairman*

Medical Service

This committee has met on two separate occasions during the year, March 7 and June 28. The sub-committees have been quite active during the year, and their reports were received on both occasions. The sub-committee on medically indigent has considered this problem and recommended that this matter be dealt with on an entirely local basis, each county or city medical society being responsible for resolving its problems with the local department of public welfare and governing agency.

The committee on prepaid medical care and hospital insurance and its sub-committee on insurance have held several meetings and considered problems that have been referred to them. These problems have been resolved and, so far as we know, to the satisfaction of all concerned. This committee is performing a very important service, and any problem relating to medical or hospital insurance should be considered by them.

Due to circumstances beyond their control, the sub-committee on hospital-physician relationships has been unable to meet. However, the entire committee on medical service has considered some of their problems and has made recommendations regarding same.

The sub-committee on rural health, chairmanned by Dr. Cecil G. Finney, again presented awards to the 4-H health project winners at the annual meeting at Blacksburg.

The sub-committee on industrial medicine has been inactive during the year. However, the chairman of the medical service committee and another member of this committee were invited to appear before a committee of the Virginia Advisory Legislative Council on the advisability of a "Second Injury Law". Following a closed meeting of this committee, an open meeting for the public was held and several speakers appeared, some of whom were obviously opposed to this type of legislation. It was the opinion of those attending this committee meeting, however, that those who had given real consideration to both sides of the question were very much in favor of this type of legislation.

The committee wishes to make the following recommendations for the future:

1. That the appropriation of $500 for the purpose of making awards to the 4-H Clubs be continued.
2. That a liaison be established with the Virginia Hospital Administrators Association and that a committee be appointed to meet with this organization in order that we may be kept aware of its activities.
3. That the recommendations of the sub-committee on care of the medically indigent be accepted.
4. That physicians who are involved in litigation suits should not charge their services to the insurance

company responsible for medical care. It was the opinion of the committee on prepaid medical and hospital insurance that fees for services rendered were just but that they should not be a part of the fee for medical attention.

5. That the House of Delegates should reaffirm its previous position taken in 1958 and 1959 regarding the desirability of a "Second Injury Law".
6. That any committee establishing a recommended fee system should consult the various specialties regarding the value of their services before the final adoption of such a recommended system.

CHARLES L. SAVAGE, M.D., *Chairman*

Conservation of Hearing

During the past year, in which many unusual problems harried those concerned with school populations, it is heartening to find from the reports of the members of the Committee on Conservation of Speech and Hearing, an unabated and continued interest. The programs which were initiated to handle this handicapped group as local problems, have continued to thrive and extend their service. To the established active programs now in Richmond, Charlottesville, Lynchburg and Bristol, now has been added another in Norfolk, by the development of a Speech and Hearing Center at the College of William and Mary.

Previous reports to the Society have called attention to the obvious lack of uniformity of sponsoring groups, organization, personnel, goal and financing of each separate project in each separate community. Although this is easily understandable to people experienced in welfare and therapy problems, it is true that confusion does exist and will have to be resolved before these matters can be turned over to a yet-to-be-established Commission, such as now exists for the Blind. One of the technical factors concerning personnel, for instance, is that the lack of qualified therapists available generally has deluded, in some areas, the standards accepted by the State Board of Education and National Association. This and similar problems has concerned the leaders of the speech therapy groups and has been met by the establishment of a Virginia Chapter of the American Association for Speech and Hearing. Thus this reorganization of qualified personnel may be able to stimulate an upgrading of those who are deficient by establishing better public relations between the separate projects. Statewide cooperation between speech and hearing groups would aid greatly in dissimination of media designed to interest undergraduates in our normal colleges in this field of endeavor, as well as better public education for all. The spectre of continued confusion will serve as a goad to this Committee towards its objectives of establishing some degree of uniformity between the spheres of local interest.

It is with gratitude that the Committee wishes to recognize the efforts of the many service clubs who have continued to express their interest in these matters. The Junior League of Richmond and Norfolk areas efforts have been noted in previous reports. Special mention should be made of the Junior Chamber of Commerce's screening program in the smaller communities near Charlottesville this past year, and the Portsmouth Kiwanis Club's fourth season of sponsoring summer and fall speech clinics and training programs. The Committee further notes with appreciation the loyal, active individual supporters in every area of the state, as well as cooperation from the foundations mentioned above, and from this membership of the Virginia Society for Crippled Children and Adults and the State Board of Health and Education.

The new surgical techniques of tympanoplasty and stapes mobilization have created much excitement in the field of otolaryngology. With the broadened outlook of experience in these matters, the old dream of a dry ear and good hearing after mastoidectomy seems almost within our grasp. Also, with experience, the various schools of thought have united to create a new philosophy which has been most harmonious. The Committee is pleased to report that the various regions of the state now possess competent otologic surgical consultants. Physicians who are interested further in these matters are urged to consult one of the members of this Committee.

CAL T. BURTON, M.D.
JAMES R. GORMAN, M.D.
W. COPLEY MCLEAN, M.D.
PETER PASTORE, M.D.
JOHN G. SELLERS, M.D.
FLETCHER D. WOODWARD, M.D.
NEIL CALLAHAN, M.D., *Chairman*

Virginia Medical Service Association
Richmond, Virginia

BLUE SHIELD SENIOR CITIZEN CONTRACT

ENROLLMENT:

The Senior Citizen Contract shall be available to (and restricted to) persons age 65 and over, (also to single females age 62 and over)—provided these persons are not eligible for Blue Shield enrollment through employee Groups. Previously enrolled Blue Shield members may convert to this Contract upon attainment of the stipulated ages and retirement.

The Plan's usual health statement form for non-Group enrollment will be required. However, those persons enrolling during the initial offering will be accepted regardless of health status. Those enrolled subsequently will be underwritten liberally.

COVERAGE:

The scope of benefits shall be the same as those available under the Blue Shield Standard Contract:

(1) Medical Care—60 days per hospital confinement. Discharge and readmission within 90 days constitutes the same hospital confinement.
(2) Surgical Care—According to Fee Schedule (maximum $150.00).
(3) Anesthesia—According to Fee Schedule
(4) Radiological Services—Up to maximum of $50.00 per contract year for diagnostic x-ray examinations and up to maximum of $100 per contract year for therapy (also up to $100 per contract year for rental or cost of radioactive materials).
(5) Pathological Services—limited to tissue examinations (Surgical pathology).
(6) Consultations—$7.50.

WAITING PERIODS:

Six months for pre-existing conditions, hernias, tuber-

culous conditions, nervous and mental conditions, elective surgical procedures.

INCOME LIMITS FOR FULL-SERVICE BENEFITS:

Individual	$1,500
Husband & Wife	$2,500

FEE SCHEDULE:

Except for radiological services, allowances shall equal approximately two-thirds of Standard Contract Fees (see following partial listing).

PREPAYMENT RATE:

$1.75 per month, per person.

PARTIAL LIST OF INCLUDED SERVICES WITH ALLOWANCES

MEDICAL CARE:

First two days, each	$5.00
Third through Seventh day, each	3.00
Subsequent days	2.00

SURGICAL CARE:

Appendectomy	$ 50
Cystectomy	150
Cholecystectomy	100
Gastrectomy, subtotal	100
total	150
Resection of large intestine	150
Hysterectomy, total	100
Mastectomy, radical	150
Prostectomy, subtotal	100
radical	150
Thyroidectomy	100
Cataract, operation	100
needling	35
Fractures:	
Femur	125
Radius and ulna	50
Tibia	50
Tibia and fibula	75
Colles'	35
Potts	50

ANESTHESIOLOGY:

Blue Shield Surgical Fee	*Blue Shield Anesthesia Fee*
$5 to and including $60	$10
61 " " " 75	15
76 " " " 125	20
126 " " " 150	30

RADIOLOGICAL SERVICES:

Same as Standard Blue Shield Medical Surgical Contract.

PATHOLOGICAL SERVICES:

Surgical, gross only	$2.50
gross and microscopic	7.50
frozen section (includes permanent section)	17.50

AUDITOR'S REPORT

OFFICERS AND COUNCILORS
THE MEDICAL SOCIETY OF VIRGINIA
RICHMOND, VIRGINIA

GENTLEMEN:

We have made an examination of the books and records of THE MEDICAL SOCIETY OF VIRGINIA, Richmond, Virginia, for the fiscal year ended September 30, 1959, and have prepared therefrom the Balance Sheet, Exhibit "A", Statement of Surplus, Exhibit "B", and Statement of Income, Expenses and Capital Outlay, Exhibit "C". With the exceptions noted in the immediately following paragraph, our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

We did not verify the accounts receivable by direct correspondence with the debtors, nor did we verify the accounts payable. It will be noted from the balance sheet that the amounts of these items are not material in relation to the financial position as a whole.

It is our opinion that the Balance Sheet, Exhibit "A", presents fairly the financial position of the Society at September 30, 1959, in accordance with generally accepted principles of accounting. The Statement of Income, Expenses and Capital Outlay, Exhibit "C", is prepared on a basis of cash actually received and disbursed.

Yours very truly,
MITCHELL, WIGGINS & COMPANY
By CHARLES W. ANDERSON
Certified Public Accountant

BALANCE SHEET

September 30, 1959

ASSETS

GENERAL FUND		
Cash in banks		$ 66,776.81
Accounts receivable:		
Dues from members—Estimated collectible value—1959 dues—50 @ $25.00	$1,250.00	
Advertising—Virginia Medical Monthly	6,912.58	8,162.58
Investments:		
United States Savings Bonds—Present value (Schedule 1)		20,453.00
		$ 95.392.39
PLANT FUND		
Land and building—At cost (Schedule 2)		$112,073.67
Furniture and equipment: (Schedule 2)		
Estimated value — October 1, 1950	$5,353.11	
Cost of acquisitions since October 1, 1950	7,701.30	13,054.41
		$125,128.08

EXHIBIT "A"

LIABILITIES AND SURPLUS

GENERAL FUND	
Accounts payable:	
Preparation of Medical Journal—September, 1959	$ 3,857.29

Surplus:		
Available for appropriation:		
Balance—September 30, 1959 (Exhibit "B")		91,535.10
		$ 95,392.39
PLANT FUND (Exhibit "B")		
Surplus invested in plant assets		$125,128 08
		$125,128.08

STATEMENT OF SURPLUS
For the Fiscal Year Ended September 30, 1959
EXHIBIT "B"

GENERAL FUND		
Balance—October 1, 1958		$ 78,081.29
Add:		
Net cash increase (Exhibit "C")	$12,310.40	
Increase in accounts receivable	1,436.40	
Increase in bond interest adjustment	499.50	
TOTAL	$14,246.30	
Deduct:		
Increase in accounts payable	792.49	13,453.81
Balance—September 30, 1959 (Exhibit "A")		$ 91,535.10
PLANT FUND		
Balance—October 1, 1958		$132,469.75
Add:		
Expended for new building	$18,028.67	
Expended for furnishings and decorations	2,205.41	
Expended for furniture and equipment	6,749.65	26,983.73
TOTAL		$159,453.48
Deduct:		
Book value of real estate and furniture sold		34,325.40
Balance—September 30, 1959 (Exhibit "A")		$125,128.08

STATEMENT OF INCOME, EXPENSES AND CAPITAL OUTLAY
For the Fiscal Year Ended September 30, 1959
EXHIBIT "C"

	ACTUAL	BUDGET
GROSS INCOME		
Membership dues	$ 57,935.24	
Interest on investments	998.90	
American Medical Association	359.62	
Miscellaneous	81.19	
Virginia Medical Monthly:		
Advertising	$46,237.86	
Subscriptions—Non-members	392.81	46,630.67
TOTAL	$106,005.62	

EXPENSES		
Executive office:		
Salaries	$27,474.88	$27,785.00
Telephone and telegrams	1,330.41	1,550.00
Postage	1,220.60	1,250.00
Stationery and supplies	1,723.98	1,000.00
Office equipment—Repairs and Replacements	922.34	800.00
Building maintenance and repairs—Net	3,803.48	3,500.00
Convention expense	(2,384.63)	1,000.00
Council and committee expenses	953.33	2,500.00
Delegates and executive assistant to A.M.A.	1,021.12	1,950.00
President's expenses	837.12	1,000.00
Traveling expenses	1,255.04	1,700.00
Preparation and distribution of medical journal	38,717.33	36,000.00
Scientific exhibits	1,999.55	2,500.00
Legal expenses	1,900.00	2,000.00
Walter Reed Commission	88.80	500.00
Woman's Auxiliary	—	100.00
Membership dues—Affiliated agencies	200.00	205.00
Editor—Virginia Medical Monthly	600.00	600.00
Special appropriations:		
Virginia Council Health and Education	3,000.00	3,000.00
American Medical Education Foundation	3,000.00	3,000.00
National Society on Medical Research	150.00	150.00
Rural Health	500.00	500.00
Student — American Medical Association	200.00	200.00
Other special appropriations	403.34	450.00
Social security taxes	460.13	500.00
Miscellaneous	368.23	600.00
Total—Executive Office	$89,745.05	$94,340.00
Public relations department:		
Conference expenses	$ 412.50	$ 500.00
Radio and press	44.23	600.00
Literature and bulletins	224.86	200.00
Miscellaneous	—	100.00
Total—Public relations department	$ 681.59	$ 1,400.00
TOTAL EXPENSES	$90,426.64	$95,740.00
EXCESS OF OPERATING INCOME OVER OPERATING EXPENSES	$15,578.98	

Other Income		
Sale of real estate and office furniture	23,715.15	$ —
Total		$39,294.13
Capital Outlay		
New office building and equipment	26,983.73	$29,160.41
Excess of Income Over Expenses and Capital Outlay (Exhibit "B")		$12,310.40

Plant Fund Assets
September 30, 1959

Schedule 2

Land and Buildings—At cost		
4205 Dover Road, Windsor Farms, Richmond, Virginia:		
Land	$22,706.58	
Office building	86,161.68	
Furnishings and decorations	2,205.41	$111,073.67
Walter Reed House, Belroi, Virginia		1,000.00
Total Land and Buildings		$112,073.67
Office Furniture and Equipment		
Estimated insurable value at October 1, 1950		$ 5,353.11
Purchased subsequent to October 1, 1950:		
Cost during fiscal year ended September 30, 1951	$ 951.65	
Cost during fiscal year ended September 30, 1959	6,749.65	7,701.30
Total Office Furniture and Equipment		$ 13,054.41
Total Plant Fund Assets (Exhibit "A")		$125,128.08

Financial Condition

The financial condition of the Society at September 30, 1959, is shown in the Balance Sheet, Exhibit "A", on the accrual basis. A summary of the financial condition at September 30, 1959, is presented as follows in comparison with the two preceding years:

	September 30,		
	1959	1958	1957
Assets			
Cash	$ 66,776.81	$ 54,466.41	$ 83,218.96
Accounts receivable	8,162.58	6,726.18	6,221.21
Investments	20,453.00	19,953.50	38,777.62
Land, buildings and equipment	125,128.08	132,469.75	68,892.68
Totals—All Funds	$220,520.47	$213,615.84	$197,110.47
Liabilities, Surplus and Fund Balance			
Liabilities:			
Accounts payable	$ 3,857.29	$ 3,064.80	$ 2,661.18
Surplus:			
General fund	91,535.10	78,081.29	125,556.61
Fund balance:			
Plant fund	125,128.08	132,469.75	68,892.68
Totals—All Funds	$220,520.47	$213,615.84	$197,110.47

Analyses and explanations of the more important balance sheet accounts follow:

Cash—$66,776.81

Recorded cash receipts were accounted for by deposits in the banks and disbursements were supported by properly signed and endorsed paid checks. Balances on deposit at September 30, 1959, were verified by direct correspondence with the banks as follows:

First and Merchants National Bank—Checking account	$34,368.76
Bank of Virginia—Savings account	8,485.30
Southern Bank and Trust Company—Savings account	1,174.23
Franklin Federal Savings and Loan Association—Savings account	11,343.85
Richmond Federal Savings and Loan Association—Savings account	11,404.67
Total	$66,776.81

Investments—$20,453.00

United States Savings Bonds, as shown in Schedule 1, were verified by inspection of the securities held in a deposit box at First and Merchants National Bank, Richmond, Virginia. They are shown in the balance sheet at their current redemption value.

Plant Fund Assets—$125,128.08

Details of the plant fund assets are shown in Schedule 2. No indebtedness against these assets was disclosed by the records. During the fiscal year ended September 30, 1959, $26,983.73 was expended in the completion of the new office building located in Windsor Farms, Richmond, Virginia, and in furniture and equipment. Real estate located at 1105 West Franklin Street, Richmond, Virginia, and office furniture were sold during the year for $23,715.15 net. This property was carried on the books at a cost of $34,325.40.

Operations

The income, expenses and capital outlays for the fiscal year ended September 30, 1959, are shown in Exhibit "C", prepared on the cash receipts and disbursements basis. A summary of income, expenses and capital outlays for the current year are compared with that of the two preceding years as follows:

	Fiscal Year Ended September 30,		
	1959	1958	1957
Income			
Membership dues	$ 57,935.24	$ 54,354.49	$53,363.44
Medical monthly publication	46,630.67	43,045.56	34,314.78
Other operating income	1,439.71	6,499.76	2,293.25
Total	$106,005.62	$103,899.81	$89,971.47
Expenses			
Executive office	$ 89,745.05	$ 81,774.12	$71,960.49
Public relations department	681.59	820.23	510.38
Total	$ 90,426.64	$ 82,594.35	$72,470.87
Operating Income Over Expenses	$ 15,578.98	$ 21,305.46	$17,500.60
Other Income			
Proceeds from sale of property	23,715.15	—	—
Total	$ 39,294.13	$ 21,305.46	$17,500.60
Capital Outlay	26,983.73	65,008.01	25,831.58
Income Over (Under) Expenses and Capital Outlay	$12,310.40	($43,702.55)	($8,330.98)

In General

The bookkeeping records were found to have been kept in a satisfactory manner.

Insurance in force at September 30, 1959, determined from policies on file, was as listed below:

Fire and Extended Coverage

Office furniture and fixtures	$14,000,00
Building—Windsor Farms, Richmond, Virginia	64,000.00
Walter Reed House, Belroi, Virginia	2,000.00

Liability—Owner's, Landlord's and Tenant's

Bodily injury	$25,000.00-$50,000.00
Property damage	5,000.00

Fidelity Bonds

Executive Secretary-Treasurer	$ 5,000.00
Secretary	5,000.00

Investment Bonds
September 30, 1959

Schedule 1

Bonds	Series	No. Bonds	Dated	Due	Value at Maturity	Cost	Value at 9-30-58	Value at 9-30-59
U. S. Savings	F	6	10-1-49	10-1-61	$ 3,000	$ 2,220.00	$ 2,661.00	$ 2,742.00
U. S. Savings	J	13	5-1-55	5-1-67	6,500.00	4,680.00	4,933.50	5,057.00
U. S. Savings	J	11	12-1-55	12-1-67	11,000.00	7,920.00	8,250.00	8,448.00
U. S. Savings	J	1	12-1-55	12-1-67	500.00	360.00	375.00	384.00
U. S. Savings	J	1	1-1-56	1-1-68	1,000.00	720.00	750.00	768.00
U. S. Savings	J	2	2-1-56	2-1-68	2,000.00	1,440.00	1,500.00	1,536.00
U. S. Savings	J	2	7-1-56	7-1-68	2,000.00	1,440.00	1,484.00	1,518.00
Total					$26,000.00	$18,780.00	$19,953.50	$20,453.00

(Exhibit "A")

Editorial....

Fluoridation Again

DURING THE PAST fifteen years about 1800 American communities with approximately 35,000,000 inhabitants have adopted fluoridation of their public water supplies as a means of lessening dental decay. Similar programs are in operation in 20 foreign countries. An additional seven million Americans in approximately 1900 communities drink water containing at least 0.7 parts per million of fluoride, which occurs naturally in these areas. Fluoridation is approved by every major scientific organization in this country qualified to pass on the merits or demerits of adding fluorides to drinking water.

With such widespread use and well qualified backing it would seem that fluoridation has won general acceptance. A closer look, however, shows that such is not the case. The larger cities have been generally favorable to fluoridation but the smaller towns have held back. Sixty-six per cent of American cities with populations in excess of a half million have fluoridation programs but only 17 per cent of communities with populations of 2,500 to 10,000 have adopted this method and a bare 5 per cent of the smaller towns have this safeguard.

More disturbing is the fact that about 75 cities have discontinued fluoridation during the past five years. This change of heart is the result of a militant minority that recently has formed two national organizations opposed to fluoridation. These groups, consisting chiefly of laymen, publish periodicals and contribute frequent antifluoridation articles of an emotional nature to national magazines.

Virginia has had more than its share of fluoridation controversies. Charlottesville and Blackstone began fluoridation only to abandon it as the result of local opposition. Petersburg passed the necessary ordinance, installed the equipment and then rescinded its action before fluoridation was actually begun as the result of objections raised by some of its citizens.

The City of Richmond began fluoridation of its water supply in 1952. Despite the lack of any evidence of harm resulting from the addition of 1 ppm. to its water, an antifluoridationist this fall persuaded a Councilman to introduce a rescinding ordinance which failed to pass by the narrowest of margins. The final ballot was four to four with five votes required to rescind the former ordinance. Close as this vote was, it represented a last minute change of heart on the part of the four Councilmen who voted to continue fluoridation, for prior to the hearing only one of the nine Councilmen stated he would support fluoridation but when the time came he was out of town and unable to attend the meeting.

The antifluoridation arguments advanced at this hearing followed the usual pattern. Much was made over the fact that several Richmond physicians and dentists intimated that fluoridation could have harmful effects. One speaker stated the program increased dental decay and that was why doctors and dentists favored it. Another stated that nationwide fluoridation was really a conspiracy on the part of the "Aluminum Trusts" to enable them to dispose of a by-product in the manufacture of their wares. One speaker said fluorides were used by the Russians to brain wash their subjects and suggested that the same sort of thing may be taking place in this country.

The fluoridation program was called communistic and also dictatorial. A package of rat poison containing fluoride was entered as evidence. One speaker stated that addition of a drug to his drinking water conflicted with the teaching of his church. A frequent objection raised was that the program violated constitutional rights. The fear expressed most often by the antifluoridationists concerned the danger of adding a drug, about which they said little was known, to the drinking water of a community. The opponents of fluoridation did not realize, or chose to overlook, the high concentration of fluoride that occurs naturally in many parts of Virginia. For over three centuries our forebears have drunk water from sources that often contained many times the amount of fluoride that is added to our drinking water. The artificially fluoridated water never contains over 1 ppm. and frequently has a slightly lower concentration.

Chesterfield county has 3.6 ppm. of fluoride in wells in the neighborhood of Chester. Wells in Henrico county vary in fluoride content from 0.5 to 6.88 ppm. Wells in Lancaster county contain natural fluorides to the extent of 3.6 ppm. Nansemond county has high levels which vary from 3.6 to 6.4 ppm. Northumberland county has almost as high a level while Southampton, with 7.2 pp., has the highest known reading in the State of Virginia. This means, for example, that fluorides occur naturally in some wells near Franklin, Virginia, in a concentration more than seven times the maximum found in artificially fluoridated water. If drinking water containing fluoride in 1 ppm. is hazardous, why has not some demonstrable harm resulted to the untold thousands of Virginians who have taken many times this concentration throughout their entire lives?

Compare these high but innocuous concentrations with the following news item which appeared on page 1 of the May 30, 1959, issue of the American Capsule News, a Washington, D. C., publication which follows the antifluoridation line and also advertises a gadget to take this chemical out of water.

> "In Sheboygan (Wisconsin) the first city to be fluoridated (12 years ago) reports that come to us are heartrending. Middle aged people are old; young people are middle aged. The fluoride shuffle is a common thing among pedestrians. The undertaking business is reported flourishing. We have been unable to procure the death statistics for the last 15 years. Our correspondents there say it would be dangerous to try it. The Congressman from that district (Van Pelt) promised to get it for us but when we tried to pick it up he acted like we had leprosy."

And all this havoc by just adding 1 ppm. of fluoride. How silly can one become?

Twenty-nine Virginia communities have adopted fluoridation. Alexandria, Danville, Fredericksburg, Lynchburg, Newport News, Norfolk, Portsmouth, Richmond, Roanoke, Winchester and Blacksburg receive the benefits of artificial fluoridation. These, as well as the smaller towns in Virginia, which have adopted this program, will have to be on a twenty-four hour alert for the antifluoridation groups are constantly probing for a weak spot in the fluoridationist's armour and doubtless will continue to do so until something new turns up to divert their interest.

HARRY J. WARTHEN, M.D.

Society Activities . . . .

The Virginia State Orthopedic Society

Had its annual business meeting and luncheon at the Hotel Roanoke on October 5th, with Dr. George Hollins presiding. Dr. William Deyerle, Richmond, was elected president; Dr. Phil C. Trout, Roanoke, vice-president; and Dr. Ernest B. Carpenter, Richmond, secretary-treasurer.

The annual scientific meeting will be held in Richmond in the spring of 1960.

Norfolk County Medical Society.

Dr. W. W. Taylor has succeeded Dr. K. K. Wallace as president of this Society. Dr. John Franklin is president-elect; Dr. Donald Faulkner, vice president; Dr. William Hotchkiss, treasurer; Dr. Meyer I. Krischer, recording secretary; Dr. George Elsasser, corresponding secretary; and Dr. R. B. Grinnan, local councillor.

Washington Dermatological Society.

Dr. June Carol Shafer, Arlington, has been named chairman of the Washington, D. C. Dermatological Society. Meetings are held in Washington on the fourth Thursday of each month, October through May.

Roanoke Academy of Medicine.

Dr. William H. Kaufman has been installed as president of the Academy. Dr. John A. Martin is chairman of the executive committee, with other members being Drs. Rufus P. Ellett, Jr., Richard H. Fisher, John E. Gardner, Hugh H. Hagan, Jr., William F. Hatcher, Charles A. Hefner, John A. Martin, Louis P. Ripley, and W. Conrad Stone.

Committee chairmen are Dr. A. P. Jones, judicial and ethics; Dr. W. R. Whitman, Jr., public relations; Dr. Edwin J. Palmer, program; Dr. P. A. Wallenborn, Jr., legislative; Dr. Phillip C. Trout, medical service; Dr. Homer Bartley, membership; Dr. H. B. Stone, Jr., mediation; Dr. William F. Weller, house; Dr. Robert L. A. Keely, liaison civil defense; Dr. H. G. Lockhard, Jr., blood bank; and Dr. R. F. Bondurant, library.

Richmond Academy of General Practice.

At the meeting of the Academy on October 20th, there was a Symposium on Hypertension, with the following participants: Dr. David W. Richardson, VA Hospital, Richmond; Dr. Nathan Asbell, Camden County Hospital, Lakeland, New Jersey; Dr. H. Page Mauck, Jr., Medical College of Virginia; and Dr. Dale S. Raines, Northwestern University School of Medicine, Chicago.

Blue Ridge Academy of General Practice.

Dr. Henry T. Brobst, Roanoke, was the speaker for the meeting of the Academy held in Roanoke on October 3rd. His subject was Minor Hand Injuries and Infections.

Williamsburg-James City Medical Society.

Dr. Winfred Overholser, superintendent of St. Elizabeth's Hospital, Washington, D.C., was guest speaker at the dinner meeting of this Society held on October 14th. The meeting was in honor of Dr. Joseph E. Barrett. He was a former president of the Society and superintendent of the Eastern State Hospital, recently retired, and moved to Tennessee.

Johnston-Willis Medical Society.

Dr. H. L. Denoon, Nassawadox, has been re-elected president of this Society.

The Mid-Tidewater Medical Society

Held its quarterly meeting at Urbanna Lodge on October 28th. The following scientific program was presented: Hypercortisonism—A Problem of Continued Steroid Administration, by Dr. Barry Decker; Impaired Adrenal Function and Diffuse Vasculitis —Problems Resulting from Discontinuing Steroids by Dr. Elam C. Toone, Jr.; and Some Phase of Rehabilitation by Dr. H. W. Park. All speakers are from Richmond.

Current Currents

A STATEWIDE MILK CONTROL LAW will quite likely be sought during the next session of the General Assembly. Responsibility for enforcement of the law would be assigned the State Department of Health. This should be of particular interest to physicians since The Medical Society of Virginia has twice adopted resolutions bearing on the subject.

The House of Delegates, in 1956, adopted a resolution which recognized the fact that the sanitation of milk is a Public Health responsibility and called for the adoption of a uniform ordinance by each local Public Health jurisdiction within the Commonwealth. The ordinance recommended by the State Department of Health was suggested as a standard.

In 1958, the Council passed a motion which reaffirmed the 1956 resolution and placed the Society on record as opposing supervision of health matters by any agency other than the Department of Health.

TEN NEW AWARDS for extramural research in nursing have been announced by the Surgeon General of the U. S. Public Health Service. The new awards, totaling approximately $250,000, bring to 73 the number of nursing research grants awarded since the Nursing Research Grants Program was established in 1955. Awards to persons outside the Public Health Service for studies to discover new knowledge about nursing and improved patient care now total approximately $3,000,000. The recent awards are for studies on cardiac and psychiatric nursing, nursing education and the educational and socio-economic factors affecting nurses.

HONOLULU will be the scene of the 104th Annual Meeting of the Hawaii Medical Association, and members of The Medical Society of Virginia have been invited to attend this first meeting under statehood. The meeting will be held on May 12-15, 1960, and an exceptional program of scientific and social events is being arranged. At least one state medical society is arranging a special jet plane flight to the Islands.

DO YOU KNOW that riders of the spectacular and romantic Pony Express who, in 1860 and 1861, carried the mail between Missouri and California, were teenagers weighing less than 125 pounds.

Shakespeare presented eight doctors as characters in his plays. They include Dr. Caius in The Merry Wives of Windsor, Gerard de Narbon in All's Well That Ends Well, the physician in King Lear, the two doctors in Macbeth, Cerimon in Pericles, Cornelius in Cymbeline, and Dr. Butts in Henry VIII.

THE TAX COURT of the United States has handed down two decisions of interest to physicians. The first decision, as reported by the Washington Report on the Medical Sciences, holds that there is no reason why a woman who makes herself extremely useful in her husband's medical practice should not be permitted to be his professional partner, for tax purposes, even though she is not an M.D. The other decision rejects the argument of the loophole-seeking patient that he did right in setting down dancing instructions under the head of "medical expenses" because his physician said the ballroom might furnish mild exercise.

The background of the latter case is particularly interesting. The patient was advised to take up dancing and table tennis to strengthen abdominal muscles following a series of operations. The Internal Revenue disallowed claims for deductions, as medical expenses, of over $4,000 for dancing instructions for over a three-year period. The Court, in its decision, said among other things "we think it can be said here that dance lessons do not constitute medical care within the intendment of the (Tax) statute." It also pointed out that instructresses in the dance studio had no training in physical or psychiatric therapy.

The Court went on to say that "It is not at all unusual for doctors to recommend to a patient a course of personal conduct and personal activity which, if pursued, will result in health benefits to the patient, but the expenses therefor are generally to be considered ordinary personal expenses. . . ."

LATEST FIGURES from the Social Security Administration show that in August, 1959, payments to beneficiaries of Old Age, Survivors and Disability Insurance approximated $822 million. Checks are being mailed monthly to 13,396,000 persons—11 million of whom are aged 62 and over. Some 300,000 in the 50-64 age group are receiving disability payments. At this rate, annual payments will total $9,864 million.

THE AGE-50 RULE in disability insurance may soon be liberalized. According to a report by the Washington Report on Medical Sciences, the Eisenhower Administration is thinking of asking Congress to take such action. It will be recalled that AMA strenuously, but vainly, fought the bill which authorized workers to apply for and receive disability benefits at age 50 instead of waiting until their 65th birthday. It was argued that if the age floor was lowered, sooner or later it would be abolished.

THE NEXT FEW YEARS, according to predictions by U.S. Health Officials and Physicians, will find hospital costs soaring, doctors' fees holding steady and medical insurance growing until just about everyone is covered for every kind of illness and accident. The predictions were reported by "Life" in the concluding article of its four part series on the American doctor.

News Notes . . . .

New Members.

Since the list published in the November issue of the Monthly, the following have been admitted into membership in The Medical Society of Virginia:

Olav H. Alvig, M.D., McLean
Robert Francis Baxter, M.D., Grundy
Delos White Boyer, M.D., Danville
Charles Dick Burch, M.D., Richmond
Frances Jones Dillard, M.D., South Boston
Keith Castleton Edmunds, M.D., Roanoke
Joseph Charles Evers, M.D., McLean
William Ferguson, M.D., Crittendon
William Joseph Gazale, M.D., Fairfax
John Shelton Horsley, III, M.D., Richmond
John Jofko, M.D., Roanoke
Werner Krebser, M.D., McLean
Elisabeth S. Lee, M.D., Hollins
Chalmers Albert Loughridge, M.D., Alexandria
James Bell Magee, M.D., Charlottesville
Donald H. McNeill, Jr., M.D., Front Royal
Chimer Davis Moore, Jr., M.D., Wytheville
Joseph E. Shuman, M.D., Arlington
John Miles Stirewalt, M.D., Waynesboro
George Szele, M.D., Annandale
Robert Owen Williams, M.D., Roanoke

Golf Tournament.

Dr. E. J. Keffer, Jr., Roanoke, has won the 1959 golf championship of The Medical Society of Virginia. Firing a one under par 70 over the difficult Roanoke Country Club Course, Dr. Keffer finished first in the field of 50 and was presented the trophy sponsored by the medical societies of Northern Virginia.

Finishing second with a medal score of 77, was Dr. J. E. George, Roanoke.

Winners in the low net bracket were Dr. J. T. Jackson, Leesburg; Dr. A. Epes Harris, Blackstone; Dr. John E. Gardner, Roanoke; Dr. Charles W. Richardson, Hillsville, and Dr. Frank Taylor, Roanoke.

Correction for November Issue.

In the article on The Biological and Medical Significance of Copper by Dr. Galen L. Wampler (November issue, Virginia Medical Monthly), please note the following correction: On page 641, column 1, Item E—in this and all instances thereafter, the symbol Δ should have been lower case delta as in Formula II.

Portrait of Dr. Barrett.

An oil portrait by Captain Harold Ledyard of Dr. Joseph E. Barrett has been presented to the Eastern State Hospital by employees and friends. Dr. Barrett resigned as superintendent of the Hospital and has assumed his duties as clinical director of the Eastern State Hospital of Knoxville, Tennessee.

The Soroptomist Club of Williamsburg adopted a resolution of thanks to Dr. Barrett in which they "extend to Dr. Joseph E. Barrett our grateful thanks, and though we regretfully relinquish the associations, we enthusiastically wish him Godspeed in his new position, and lovingly acknowledge that his loss of the people of the Commonwealth of Virginia is a gain for the people of the State of Tennessee."

Dr. John R. Kite,

Norfolk, has been elected as president of the Virginia Division of the American Cancer Society.

Members of Flying Club.

Two Richmond physicians, who have their own airplanes, are members of the Flying Physicians Association, which has a membership of approximately 1500 throughout the nation. They are Dr. Luther C. Brawner and Dr. Elmer S. Robertson. Promotion of general aviation safety is one of the main objectives of the organization. It is now organizing a disaster program which would enable these physicians to fly in their own planes to the scene of a major disaster if called on by a defense agency.

There are about nine Virginia physicians who are members of this Association.

Dr. Charles B. Marshall,

Martinsville, has been elected president of the Martinsville-Henry County Unit, Virginia Division, of the American Cancer Society.

Dr. A. Ray Dawson

Has been appointed acting chief of the department of physical medicine and rehabilitation of the Medical College of Virginia. He assumed administra-

tive duties of Dr. Herbert W. Park who had requested relief in order to devote more time to his work as professor of physical medicine and rehabilitation.

The interim appointment will not affect Dr. Dawson's present duties as chief of the service of physical medicine and rehabilitation at McGuire Veterans Administration Hospital.

Dr. Ennion S. Williams,

Richmond, has been elected president of the Association of Life Insurance Medical Directors of America.

New Medical Journal.

The Society of Nuclear Medicine announces the forthcoming publication of its official organ, The Journal of Nuclear Medicine. The first quarterly issue will appear during the month of January 1960. The editorial content of the Journal will be directed towards those members of the medical and allied professions who are interested in the diagnostic and therapeutic application of radioisotopes and in human radiobiology. Dr. George E. Thoma, St. Louis, Missouri, is editor.

The Mid South Postgraduate Medical Assembly

Will be held at the Peabody Hotel, Memphis, Tennessee, February 9-12, 1960.

The New Orleans Graduate Medical Assembly

Will be held March 7-10, 1960, with headquarters at the Roosevelt Hotel. The 16th Annual Clinical Tour to the West Indies will begin on March 12th.

Further information may be obtained from The New Orleans Graduate Medical Assembly, 1430 Tulane Avenue, New Orleans 12, Louisianna.

June Miami A.M.A. Meeting.

The widow of a member of The Medical Society of Virginia, now a travel consultant, will arrange a Virginia sleeping-car from Richmond with open return. Travel to pre-A.M.A. allied meetings also arranged. Post-convention cruises to Nassau and/or Havana by steamer or air can be included. Write Box "T", care the Virginia Medical Monthly, for information. (*Adv.*)

For Sale.

Westinghouse Superficial Therapy Unit. Model 270-100 KV Dermadex. Model 280 Superficial Theraflex Tube. Arm with Mobile Protective Screen. Purchased in 1957 for $3,483.00, now priced at $1,000.00. Owner deceased. For further information, contact Mrs. V. Harwood Link, 206 West Irvin Avenue, Hagerstown, Maryland. (*Adv.*)

Residency Available

In Physical Medicine and Rehabilitation. Affiliated with Medical College of Virginia; our residents have some of their training there. Salaries: Career, $6505.00 to $9808.00 p.a.; Regular, $3250.00 to $4165.00 p.a. Apply: Manager, Veterans Administration Hospital, Richmond 19, Virginia. (*Adv.*)

Neurology Residencies.

Career and regular, available on active Service. Two neurologists and attending neurologists on staff. Affiliated with two medical schools. Opportunity for teaching, research, and diversified program. Apply: Manager, Veterans Administration Hospital, Richmond 19, Virginia. (*Adv.*)

For Sale.

Late model General Electric Vertical Fluoroscope. Contact Mrs. Sheppard K. Ames, Cape Charles, Virginia. Telephone number 108. (*Adv.*)

Obituaries . . . .

Dr. Edmund Madison Chitwood, Sr.,

Prominent physician of Wytheville, died October 22nd, at the age of seventy. He graduated from the Baltimore Medical College in 1912 and began his practice in Wythe County forty-seven years ago. Dr. Chitwood established the town's first hospital which is now the Chitwood Memorial Clinic. He was a N.&W. surgeon and served as coroner for a number of years. Dr. Chitwood was active in Masonic circles and was also a member of the Elks Club. He had been a member of The Medical Society of Virginia for forty-six years.

Dr. Chitwood is survived by his wife and two sons —Dr. W. R. Chitwood of Wytheville and Dr. E. M. Chitwood, Jr., of Pulaski.

Dr. Hubbard Corbin Padgett,

Roanoke, died October 31st of injuries received when he was struck by a car the week before. He was seventy-one years of age and graduated from the Medical College of Virginia in 1913. Dr. Padgette had practiced in Roanoke for about forty years. He was leaving his office when he was struck down by a hit-and-run driver. Dr. Padgett had been a member of The Medical Society of Virginia for forty-one years.

His wife and a daughter survive him.

Dr. William Latane Flanagan,

Christiansburg, died October 12th. He was a native of Fluvanna County and thirty-one years of age. Dr. Flanagan graduated from the Medical College of Virginia in 1953. He was a member of The Medical Society of Virginia. A daughter survives him.

In Memoriam—Dr. Pitt.

The number of his days on this earth were 79 years, 8 months and 26 days. He did not evade the proffered cup of the Angel of Death. In conformity with his way of life he submitted to those eternal decrees uncomplainingly and with dignity. During the night of July 10, 1959, he was amongst the immortals. When his housekeeper came to work that morning Dr. Pitt was not up and about as was his custom, and upon calling she received no response from him. On further solicitation she found him lying in bed, the cover neatly folded as though someone had tucked him away for a night's repose. He died quietly, apparently, sometime soon after retiring. He lived alone and the exact hour was not discernible.

Dr. Cullen Pitt lived quietly, serenely, unhurriedly, simply, lending a sympathetic ear always to those in trouble but never complaining of that world within himself, nor of that boundless universe surrounding him, about which he was ever eager and anxious to know more.

He was born in Richmond, Virginia, on November 14, 1880. His father was Dr. Robert H. Pitt, a long time owner and editor of the Baptist denominational paper of the State of Virginia, "The Religious Herald." His mother was Anne Robertson Pitt. His preparation for college was obtained at the Nolley's Preparatory School of Richmond. From that school he entered Richmond College and was graduated with a B.A. Degree before he was twenty years of age. The following year he was awarded his Master of Arts Degree from that same institution. He received his M.D. Degree in 1905 from the University College of Medicine, Richmond. He interned at the old City Hospital of Richmond, before entering upon the practice of his chosen profession. From this you will observe that Dr. Pitt wasted neither energy, nor his time. He was almost unceasingly busy; but he never hurried; nor did he become depressed if his achievements were less than his expectations.

Many of the qualities of his character were unusual. He did not experience mood swings. He was always possessed of an even temper. His most intimate friends probably never heard him swear, nor did he indulge in the use of any other language which might have been objectionable. He never spoke unkindly of other people. He did not engage in the institution of comparison of physicians to the injury of some member of his profession. He never spoke in grandiose terms of himself. He never spoke regretfully of the past, nor apprehensively of the future. He possessed courage which enabled him to ferret out the truth and to live without fear of tomorrow and without troublesome regret of yesterday. He lived honorably, wholesomely, and usefully. A classical illustration of Dr. Pitt's standing for and living up to his convictions is as follows. During World War II, injuries such as sprained ankles were often novacained and the soldier was sent back to duty. As an outgrowth of that experience the athletic departments of many schools emulated that practice in order to keep a key athlete in the game. Dr. Pitt never subscribed to such procedure. He made certain that he wasn't alone in his convictions. He corresponded with the athletic departments of the leading schools of the country and to his edification he found justification in his practices. It is extremely doubtful that he ever had to urge himself to walk the path of rectitude and to avoid the limiting avenues of allurement. Dr. Pitt was an honest man, with himself and therefore, also, with others. He was motivated by that persistent application to duty that constitutes diligence. He deleted from his book of memory in his early youth such words as pettiness, selfishness, greed, avarice, suspiciousness and substituted for these, cultivating patience, forbearance, sympathy, love and understanding. He was always doing good and dispensing cheer every day of his life. The night before he died he had taken watermelons to his little nieces. When his brother's wife passed away he took into his home a niece and nephew and nurtured them as though they were his own. He supplied their every need and saw that they enjoyed every advantage that they had been deprived of by their misfortune.

Dr. Pitt maintained membership in the Richmond Academy of Medicine, the Tri-State Medical Society, The Society of Life Insurance Medical Directors, The Medical Society of Virginia, the Southern Medical Association, and the American Medical Association. He was Assistant Medical Director of the Atlantic Life Insurance Company from 1925 to 1940, and Medical Director from 1940 to 1956. He was physician to Westhampton College in 1913 —and in 1914 became physician to the University of Richmond from which he retired in 1958. During the 44 years which he was physician to the University students, he had their interest uppermost in his mind. He was always striving to improve the medical facilities of the University and his services to the student body. It is said that during his tenure of service no student ever had a ruptured appendix. It was through his influence and efforts

that the newest dormitory on the campus has one of the most modern infirmaries of any college in the country. For a brief period after his father's death he was editor of the Religious Herald.

Although Dr. Pitt was modest and self-effacing, he would not permit his modesty to prevent him from doing his duty. He had many friends who regarded his opinion highly. This was evidenced by the fact that he was elevated to the Presidency of the Society of Medical Life Insurance Directors.

His home life was as ideal as his professional life was splendid. In 1913 he was married to Edith Watkins, a member of one of the pioneer families of the Commonwealth of Virginia. She predeceased him by a year. He is survived by two brothers and several nieces and nephews.

The wisest of all men propounded the majestic and beautiful interrogatory and also answered it: "Seest thou a man diligent in his business? he shall stand before kings."

WILLIAM H. HARRIS, M.D.
JAMES T. TUCKER, M.D.
OSCAR L. HITE, M.D., *Chairman*

Dr. Stanley.

Dr. Thomas Eldridge Stanley was born in Hanover County, Virginia, August 23, 1908, and died June 3, 1959. He was the son of a distinguished general practitioner, and at an early age decided to follow in his father's footsteps in the practice of medicine. They both were greatly beloved physicians.

Tom Stanley was graduated from the Medical College of Virginia in 1932, served his internship in Norfolk, and returned to Hanover County to practice medicine. He was interested not only in his patients but in his community, serving for many years on the Hanover County School Board, of which he eventually became Chairman.

During World War II he was anxious to serve his country in the armed services but was declared essential to his area. He stayed at home and was the only doctor in his community and the surrounding area. Needless to say, he was constantly in demand both day and night.

In 1946 Dr. Stanley was able to secure a young physician to take over his practice, which enabled him to go to the Newton D. Baker Veterans Administration Hospital in Martinsburg, West Virginia, for postgraduate work in internal medicine. He remained there until 1951, acting as assistant chief of the medical service for the last few years.

In October, 1951, he returned to Richmond to practice internal medicine as a member of the staff of St. Elizabeth's Hospital. In spite of his absence of five years, many of his old patients returned to him and he soon again had a large patient clientele. In spite of his large practice, he retained his interest in Hanover County, maintaining his affiliation with St. Peter's Methodist Church and other local community activities.

He was a member of the Richmond Academy of Medicine, The Medical Society of Virginia, the Richmond Society of Internal Medicine, and the American Medical Association. He also maintained his membership in the Masonic Lodge at Mineral, Virginia.

In 1937 Dr. Stanley married Madalean Mundy who, along with their three children, survives him.

The medical profession of Richmond and Hanover County has lost a highly skilled and valuable member in Dr. Stanley's death. We who have known and loved him will always be grateful for the privilege of having worked with this dedicated, honest, and unassuming gentleman, for he was a gentleman in every sense of the word.

This committee recommends that a copy of this memorial be spread upon the minutes of the Richmond Academy of Medicine, and that a copy be sent to the Virginia Medical Monthly and to Dr. Stanley's family with our sincere sympathy.

DOUGLAS G. CHAPMAN, M.D.
VIRGIL R. MAY, JR., M.D.
GUY W. HORSLEY, M.D.

Dr. McGill.

At a special meeting of the Petersburg Medical Faculty, which was held on October 21, 1959, to express tribute to the memory of their late colleague, Dr. Elisha Leavenworth McGill, the following resolutions were read and unanimously adopted:

WHEREAS, God in His infinite wisdom has removed from our midst a true friend and loyal colleague, who faithfully served this city and Southside Virginia.

BE IT RESOLVED, that in the death of Dr. McGill, the profession has lost a valued associate and the community a useful and esteemed citizen, who had been a member of the Petersburg Medical Faculty for over fifty years.

Dr. McGill was born in Petersburg, on May 12, 1875. He was a graduate of the Physicians and Surgeons College of Medicine of Columbia University, New York. He served as a Captain in World War I and a valued member of the Draft Board during World War II.

Dr. McGill was a man of charming personality, conscientious and idealistic in the practice of his profession, and a true friend and honored member of the Petersburg Medical Faculty.

He was member of the Fourth District Medical Society and The Medical Society of Virginia as well as the American Medical Association.

Dr. McGill exemplified the outstanding characteristics of a general practitioner and surgeon and his loss will be felt by the whole community.

BE IT FURTHER RESOLVED, that these resolutions be spread on the minutes of the Faculty and that copies be sent to the family and to the Virginia Medical Monthly for publication.

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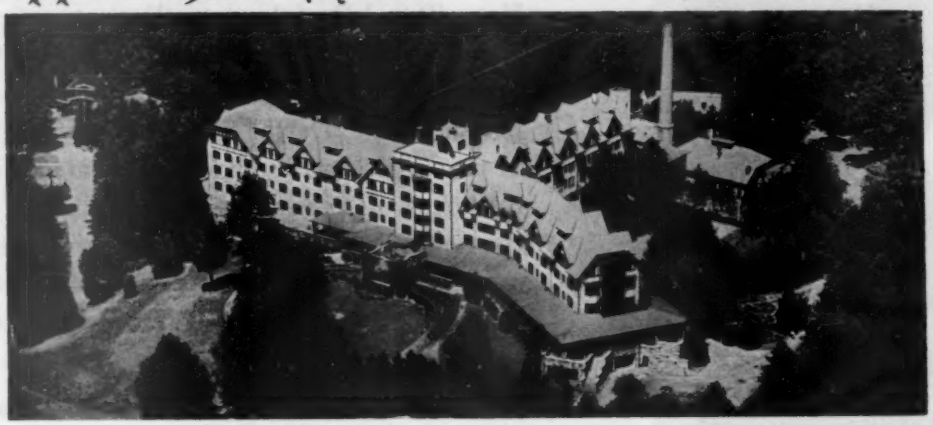

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—organisms such as *Staph. aureus, Staph. albus, A. aerogenes, E. coli, H. pertussis, K. pneumoniae, Neisseria* sp., *Shigella, Salmonella* and many strains of *B. proteus.*

Q *But if I use* KANTREX *Injection, won't that help make bacteria resistant to it also?*

Next page, please . . . . . .

* Kanamycin sulfate injection (Bristol)

Q *But if I use* KANTREX *Injection, won't that help make bacteria resistant to it also?*

A A very good question, but it is reassuring to note that in almost two years of clinical use of KANTREX for the treatment of infections for which it is recommended, the emergence of KANTREX-resistant bacterial populations has not been a problem.

Q *My impression is that* KANTREX *is just another neomycin. Isn't that so?*

A Indeed not. The only thing KANTREX and neomycin have in common is a similar antimicrobial spectrum. Otherwise, they're very different: they have different chemical structures; the toxicity of KANTREX is "much less than that of neomycin"[14]; and clinically, KANTREX Injection is practical for systemic administration routinely, while neomycin is not.

Q *You mean that* KANTREX *Injection doesn't have the nephrotoxicity of neomycin?*

A Precisely. It's true that when KANTREX Injection is used, urinary casts – even slight albuminuria or microscopic hematuria – may appear, especially in poorly hydrated patients, but this does not reflect any progressive damage to the kidneys. These signs promptly disappear on adequate hydration or termination of therapy.

Q *Then why do you recommend reduced dosage in patients with renal impairment?*

A Because renal impairment causes an excessive accumulation of KANTREX in the blood and tissues, when usual doses are administered. Since KANTREX Injection is excreted entirely by the kidneys, renal impairment leads

to unnecessarily high and prolonged blood levels; and such excessive concentrations increase the risk of ototoxicity.

Q *Is that why we see reports of patients developing hearing loss during* KANTREX *Injection therapy?*

A Yes. A study of the few reported cases in which patients have suffered impaired hearing will show that in every instance they had pre-existing or concurrent renal impairment, yet received usual or excessive doses of KANTREX Injection. Dosage recommendations for KANTREX Injection emphasize that in patients with renal dysfunction, adequate serum levels can be achieved with a fraction of the dose suggested for patients with normal kidney function – with minimal risk of ototoxicity.

Q *Since urinary tract infections are often accompanied by renal impairment, does that mean I shouldn't use* KANTREX *Injection in such conditions?*

A Not at all. With proper precautions, KANTREX Injection is an excellent drug for the treatment of urinary tract infections, especially those due to *Proteus*, *A. aerogenes* and *E. coli*, even when renal impairment is present.

Q *What are the "proper precautions" in a patient with impaired renal function?*

A The package literature covers them in detail. First, the daily dose should be reduced in such a patient. Then, if he is going to receive KANTREX Injection for 7 days or more, a pre-treatment audiogram should be done, and it should be repeated at appropriate intervals during therapy. If tinnitus or subjective hearing loss develops, or if followup audiograms show significant loss of high frequency response, KANTREX therapy should be discontinued. However, therapy for 7 days or more

is seldom required because the clinical response to KANTREX Injection is so rapid.

Q *Why do you put so much emphasis on* KANTREX'S *"rapid action"? Every antibiotic I've heard about is supposed to be "rapid acting."*

A There is such an abundance of clinical evidence about "rapid acting" that it takes KANTREX Injection out of the "supposed-to" class.[1,2,3,7,8,9,11,15,16,19,21,22,26,29,32,33] Remember, the effectiveness of KANTREX Injection therapy can usually be appraised in 24 to 36 hours. That's definite evidence of rapid action. In fact, one group of investigators reported that "the rapidity with which bacteria are killed by this agent is reflected by the promptness of the clinical response."[29]

Q *Does* KANTREX *Injection cause blood dyscrasias?*

A In extensive clinical and toxicity studies by numerous investigators, as well as almost two years of general use, not a single instance of such toxicity has been reported.

Q *Can I administer* KANTREX *Injection in any other way than by the intramuscular route?*

A Yes. While it's usually given intramuscularly, other routes are practicable: intravenous, intraperitoneal, by aerosol, and as an irrigating solution. Complete instructions are included in the package insert.

Q *So you think I ought to use* KANTREX *Injection as my first choice antibiotic in staph and gram-negative infections?*

A Yes – because all evidence to date indicates that it is bactericidal against a wide range of organisms... rapid acting... does not encourage development of bacterial resistance... is well tolerated in specified dosage... and has not caused any blood dyscrasias.

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for local gastrointestinal therapy...
not for systemic infections

Q *Why can't I use* KANTREX *Capsules for systemic medication?*

A Because there is only negligible absorption of KANTREX from the gastrointestinal tract.[3,5,6,8,28,34] Thus, capsules cannot provide effective blood levels.

Q *Then what are* KANTREX *Capsules used for?*

A Preoperative bowel sterilization, and local treatment of intestinal infections due to kanamycin-sensitive organisms.

Q *I've been using neomycin for preoperative bowel sterilization. Why should I switch to* KANTREX *Capsules?*

A Because KANTREX has been rated as "superior to neomycin" for this purpose.[6] It provides rapid and satisfactory control of coliforms, clostridia, staphylococci and streptococci; yeast do not proliferate; stool concentrations of the drug are exceptionally high; and nausea, vomiting or intestinal irritation have not been observed.[5,6]

Q *What advantages do* KANTREX *Capsules offer me in the treatment of intestinal infections?*

A A high degree of effectiveness against most of the pathogens responsible for such infections: *Salmonella, Shigella, Staph. aureus, E. coli* and *Endamoeba histolytica.* Moreover, their use has been "remarkably free of any side effects."[31]

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Infections due to kanamycin-sensitive organisms, particularly staph or "gram-negatives": genito-urinary infections; skin, soft tissue and post-surgical infections; respiratory tract infections; septicemia and bacteremia; osteomyelitis and periostitis.

DOSAGE: INTRAMUSCULAR ROUTE

Recommended daily dose is 15 mg. per kg. of body weight, in 2 to 4 divided doses.

For intramuscular administration, KANTREX Injection should be injected deeply into the upper outer quadrant of the gluteal muscle.

TOXICITY

When the recommended precautions are followed, the incidence of toxic reactions to KANTREX is low. In well hydrated patients under 45 years of age with normal kidney function, receiving a total dose of 20 Gm. or less of KANTREX, the risk of ototoxic reactions is negligible.

In patients with renal disease and impaired renal function, the daily dose of KANTREX should be reduced in proportion to the degree of impairment to avoid accumulation of the drug in serum and tissues, thus minimizing the possibility of ototoxicity. In such patients, if therapy is expected to last 7 days or more, audiograms should be obtained prior to and during treatment. KANTREX therapy should be stopped if tinnitus or subjective hearing loss develops, or if audiograms show significant loss of high frequency response.

OTHER ROUTES OF ADMINISTRATION

KANTREX should be used by intravenous infusion only when the intramuscular route is impracticable. KANTREX can also be employed for intraperitoneal use, aerosol treatment, and as an irrigating solution. See package insert for directions.

PRECAUTIONS

Use of antibiotics may occasionally result in overgrowth of non-sensitive organisms. If superinfection appears during therapy, appropriate measures should be taken.

SUPPLY

Available in rubber-capped vials as a ready-to-use sterile aqueous solution in two concentrations (stable at room temperature indefinitely):

KANTREX Injection, 0.5 Gm. kanamycin (as sulfate) in 2 ml. volume.
KANTREX Injection, 1.0 Gm. kanamycin (as sulfate) in 3 ml. volume.

CAPSULES (for local gastrointestinal therapy; not for systemic medication)

INDICATIONS AND DOSAGE

For preoperative bowel sterilization: 1.0 Gm. (2 capsules) every hour for 4 hours, followed by 1.0 Gm. (2 capsules) every 6 hours for 36 to 72 hours.

For intestinal infections: Adults: 3.0 to 4.0 Gm. (6 to 8 capsules) per day in divided doses for 5 to 7 days. Infants and children: 50 mg. per kg. per day in 4 to 6 divided doses for 5 to 7 days.

PRECAUTION

Preoperative use of KANTREX Capsules is contraindicated in the presence of intestinal obstruction. Although only negligible amounts of KANTREX are absorbed through intact intestinal mucosa, the possibility of increased absorption from ulcerated or denuded areas should be considered.

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KANTREX Capsules, 0.5 Gm. kanamycin (as sulfate), bottles of 20 and 100.

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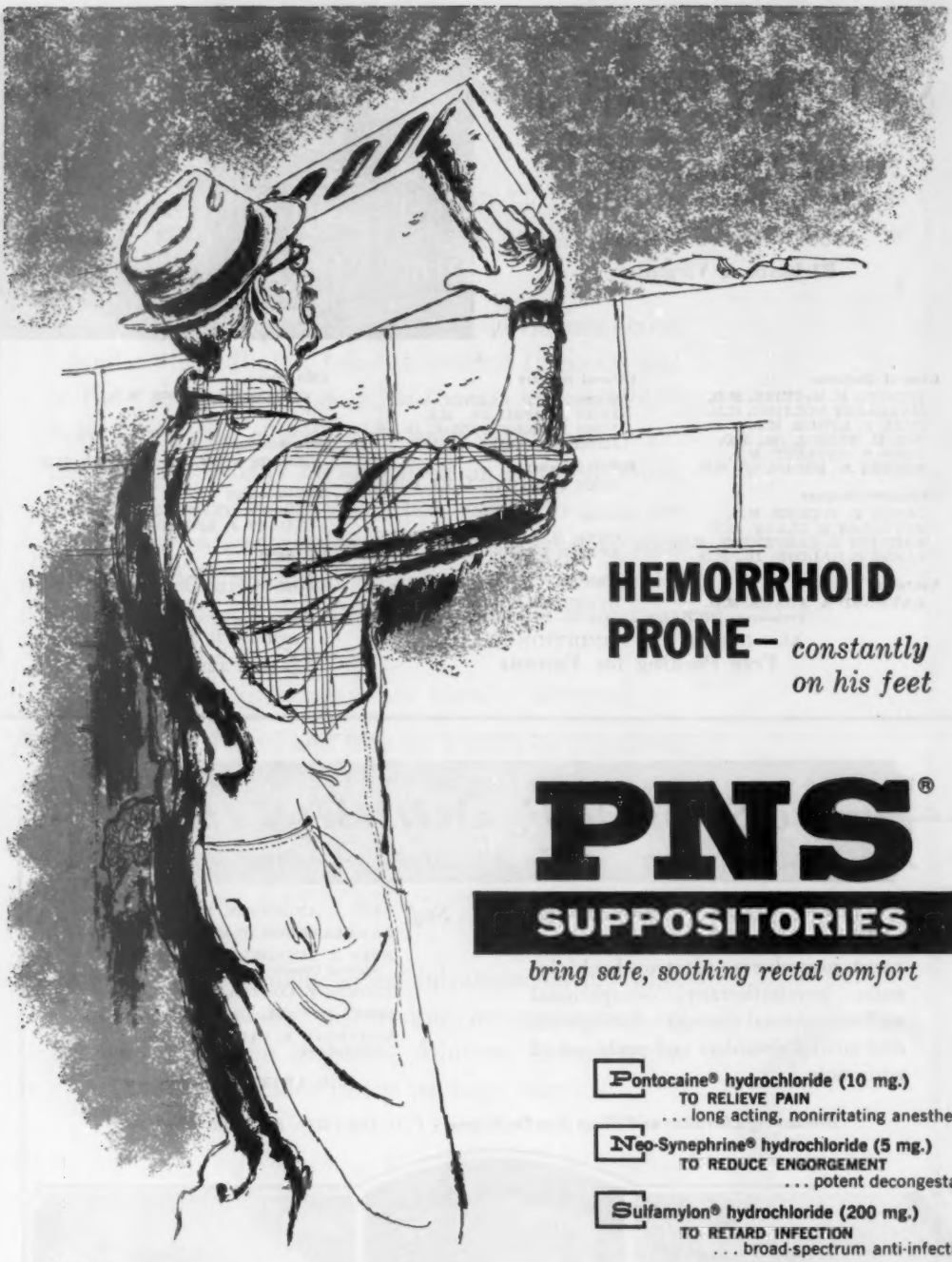

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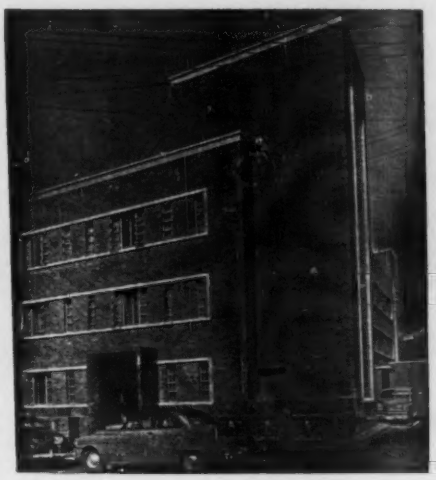

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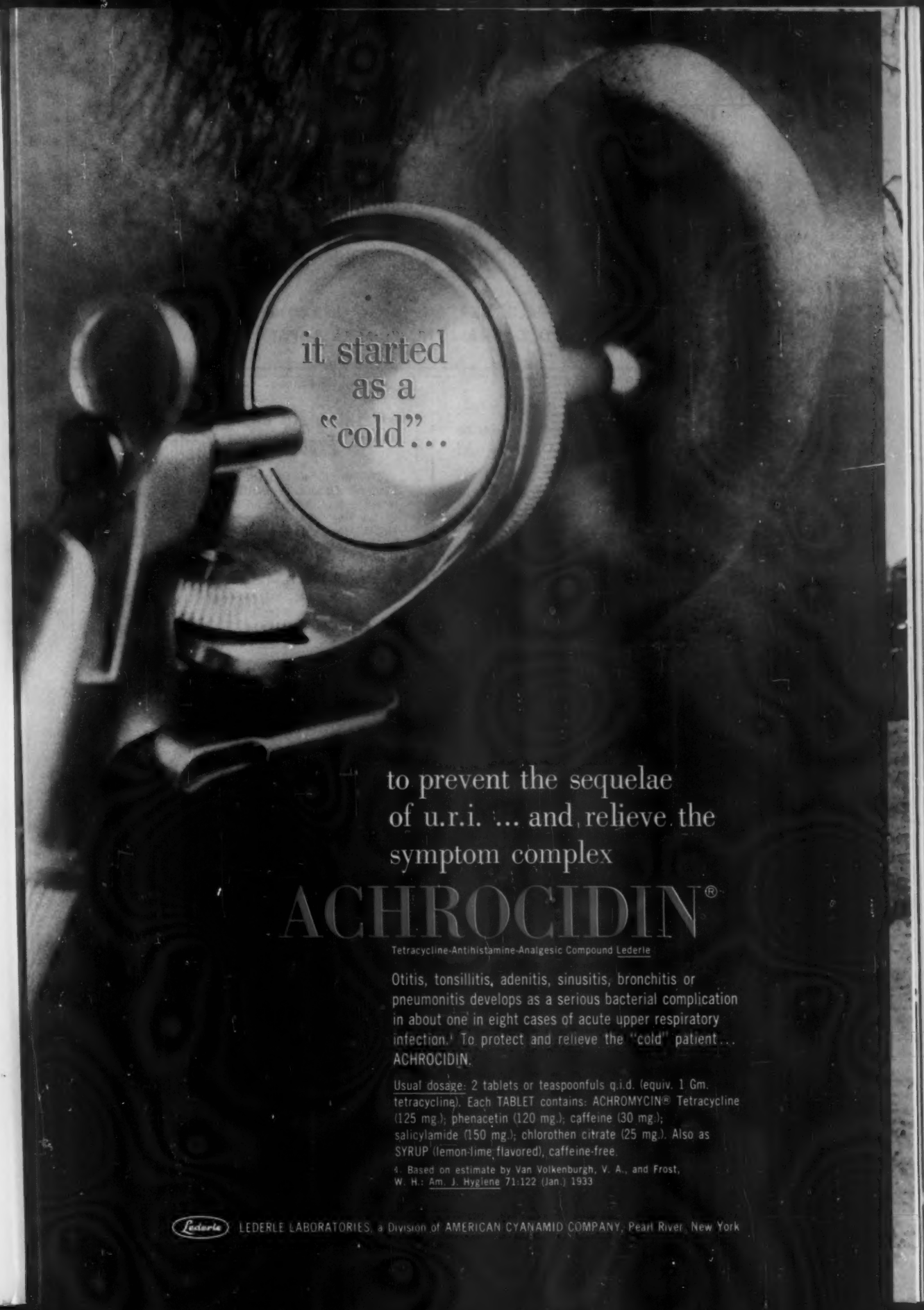

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1. Based on estimate by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122 (Jan.) 1933

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The next meeting of the Virginia Board of Medical Examiners will be held at the Richmond Hotel, Richmond, Virginia, December 1, 1959. The examinations will be held at the Hotel, December 2-4, inclusive. All applications and other documents pertaining to the examinations or to matters to be discussed by the Board must be on file in the Secretary's office on or before November 10, 1959. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

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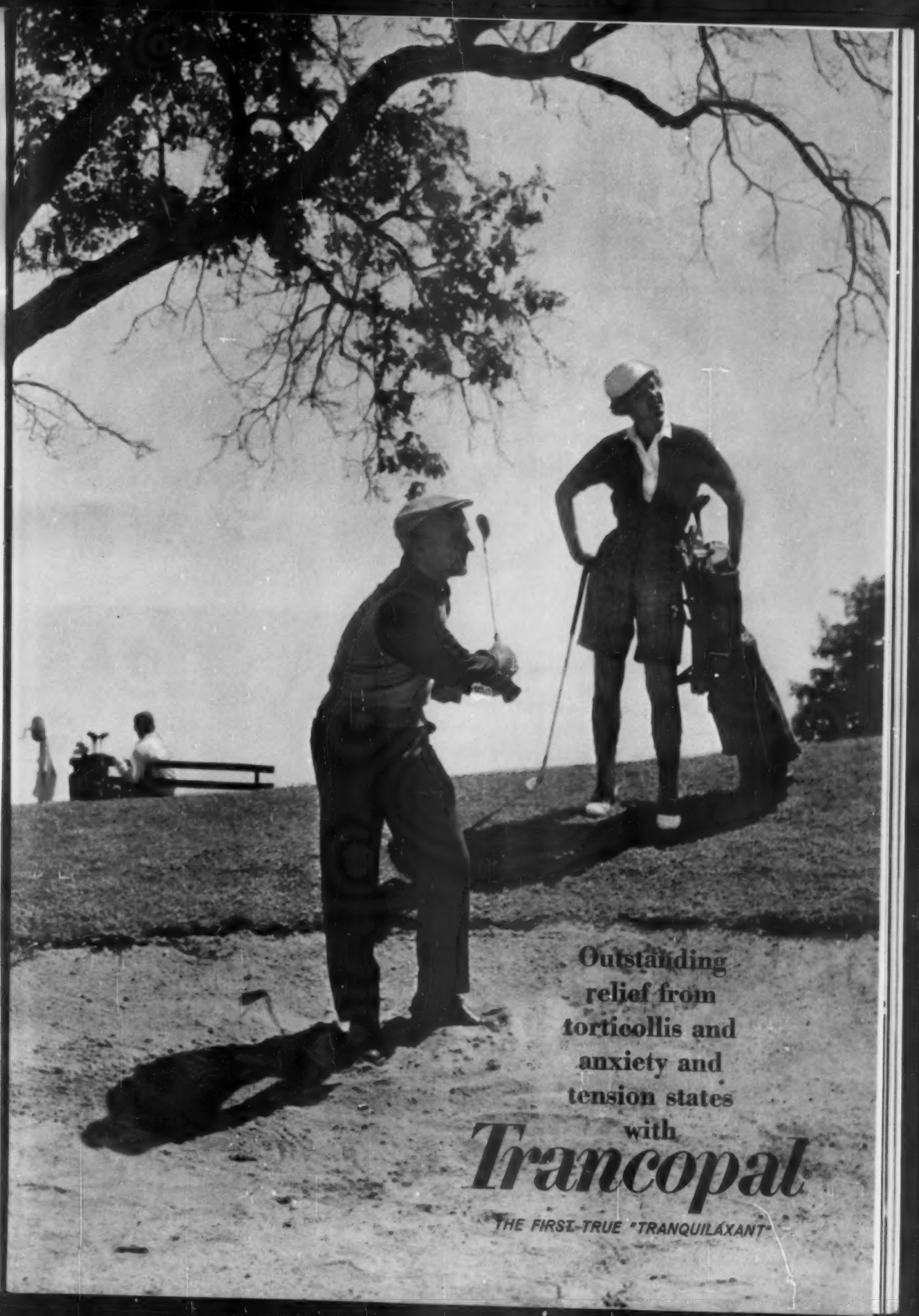
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case profile no. 2840*

A 55-year-old man complained of a painful, very stiff neck on the left side. There was marked muscle spasm that seemed to involve primarily the trapezius muscle. He had a severe headache, with the pain radiating down the left side of the neck to the shoulder. There were no other findings on physical examination and results of routine laboratory tests were normal.

Trancopal was prescribed in a dosage of 200 mg. q.i.d. The first and second dose of Trancopal gave only moderate relief. However, after the third dose, there was marked relief of the stiffness of the neck, as well as the headache and shoulder pain.

After the fourth dose, medication was gradually decreased and was discontinued on the sixth day. One week later, the patient had moderate recurrence of the torticollis, and Trancopal was again prescribed in doses of 200 mg. q.i.d. The patient obtained complete relief in one day and no further treatment was required.

for torticollis

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for anxiety and tension states

case profile no. 3382*

A 35-year-old woman, a professional model, had an acute, severe attack of anxiety. She was irrational and unable to eat, and was very restless.

Initial medication consisted of aspirin with codeine and later meprobamate. Neither was effective, and the patient's condition became worse. She had to be hospitalized because of the marked anxiety. Trancopal was then prescribed in a dosage of 200 mg. q.i.d., in addition to bed rest.

After the second dose of 200 mg. of Trancopal, the patient became calm and rational, and was able to eat. The dosage of Trancopal was gradually reduced to 100 mg. q.i.d. on the fourth hospital day, after which the patient was discharged and was able to return to her normal occupation.

**Clinical Reports on file at the Department of Medical Research, Winthrop Laboratories.*

Turn page for complete listings of Indications and Dosage.

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Low back pain (lumbago, etc.)	Dysmenorrhea
Bursitis	Premenstrual tension
Rheumatoid arthritis	Asthma
Osteoarthritis	Angina pectoris
Disc syndrome	Alcoholism
Fibrositis	
Ankle sprain, tennis elbow, etc.	
Myositis	
Postoperative muscle spasm	

Dosage: Adults, 100 or 200 mg. orally three or four times daily. Relief of symptoms occurs in fifteen to thirty minutes and lasts from four to six hours. The higher dosage is recommended for the treatment of patients in the acute stages of painful musculospastic conditions, and anxiety and tension states. Children (5 to 12 yrs.), 50 mg. three or four times daily.

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". . . Trancopal is a most valuable drug for relieving tension, apprehension and various psychogenic states."[4]

1. Collective Study, Department of Medical Research, Winthrop Laboratories.
2. Lichtman, A. L. (N.Y. Polyclinic M. Sch. & Hosp.): Kentucky Acad. Gen. Pract. J. 4:28, Oct., 1958.
3. Mullin, W. G., and Epifano, Leonard (Long Island College Hosp.): Am. Pract. & Digest Treat. To be published.
4. Ganz, S. E. (New York, N. Y.): J. Indiana M. A. 52:1134, July, 1959.

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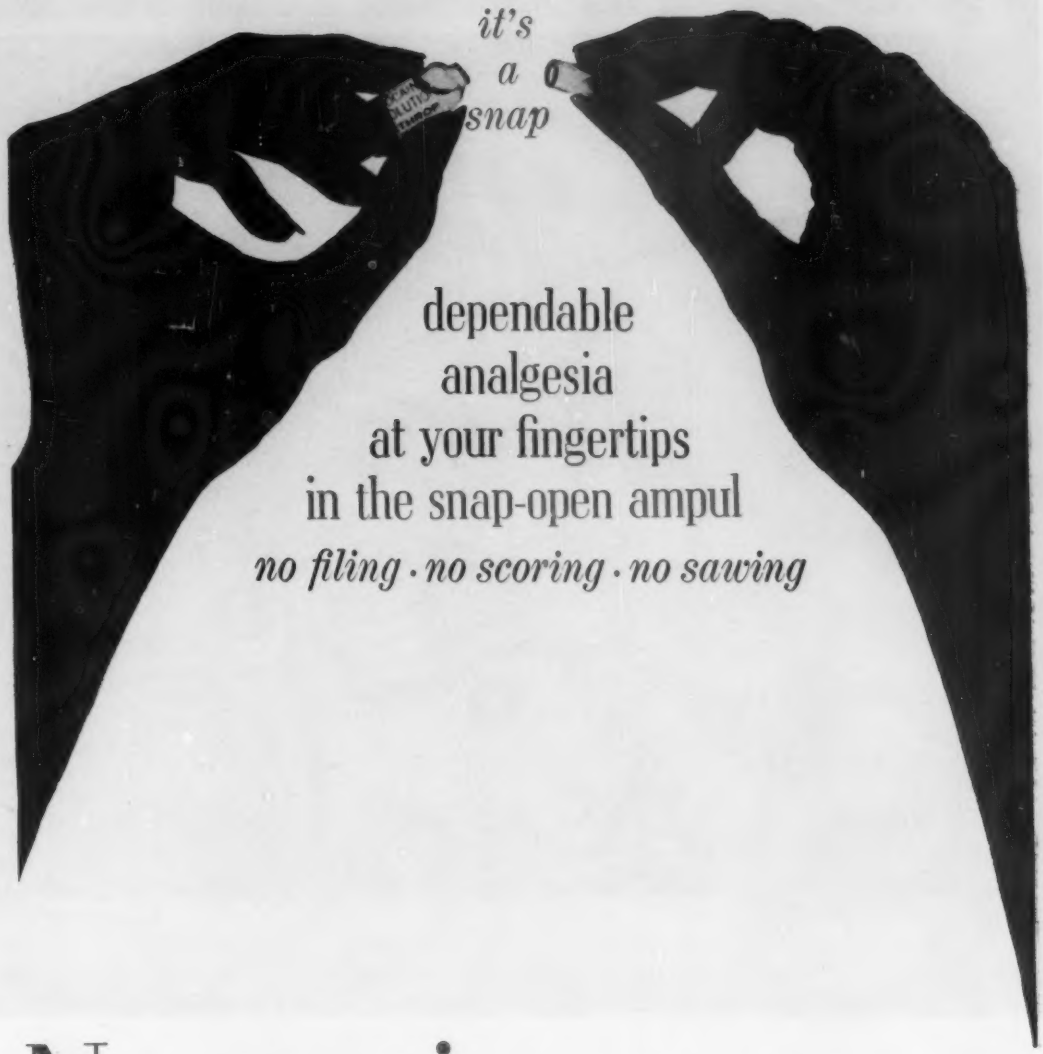

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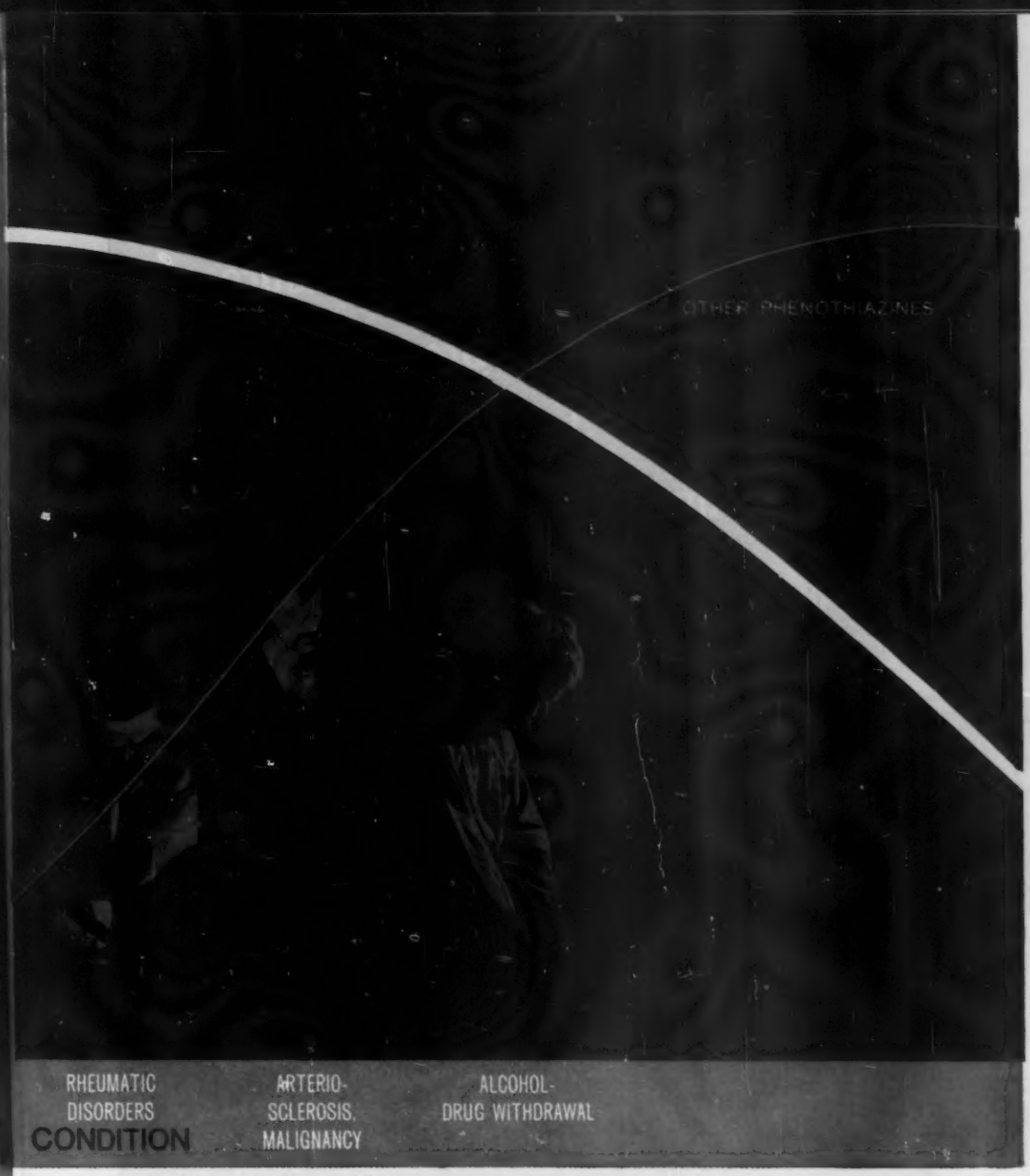

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1. Bodi, T., and Levy, H.: Clinical report, cited with permission. 2. Wetzler, R. A., and Phillips, R. M.: Clinical report, cited with permission. 3. Prigot, A.: Clinical report, cited with permission. 4. Gosline, E., *et al.*: *Am. J. Psychiat.* 115:939 (April) 1959. 5. Turvey, S. E. C.: Clinical report, cited with permission.

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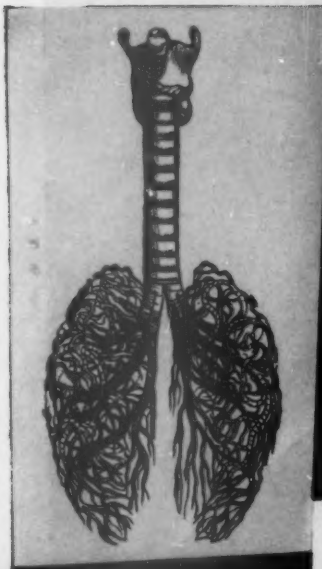

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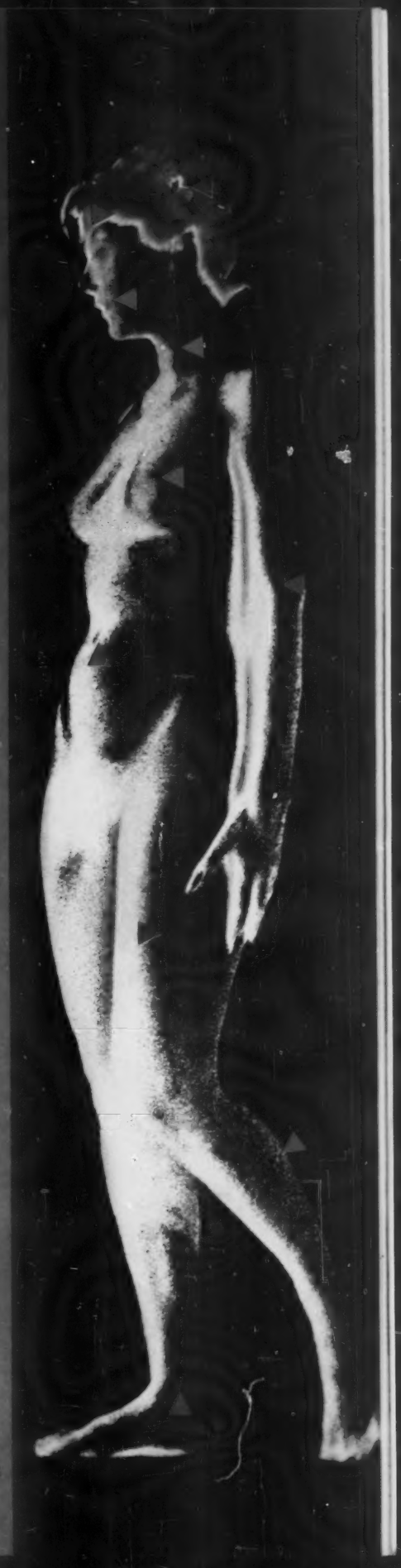

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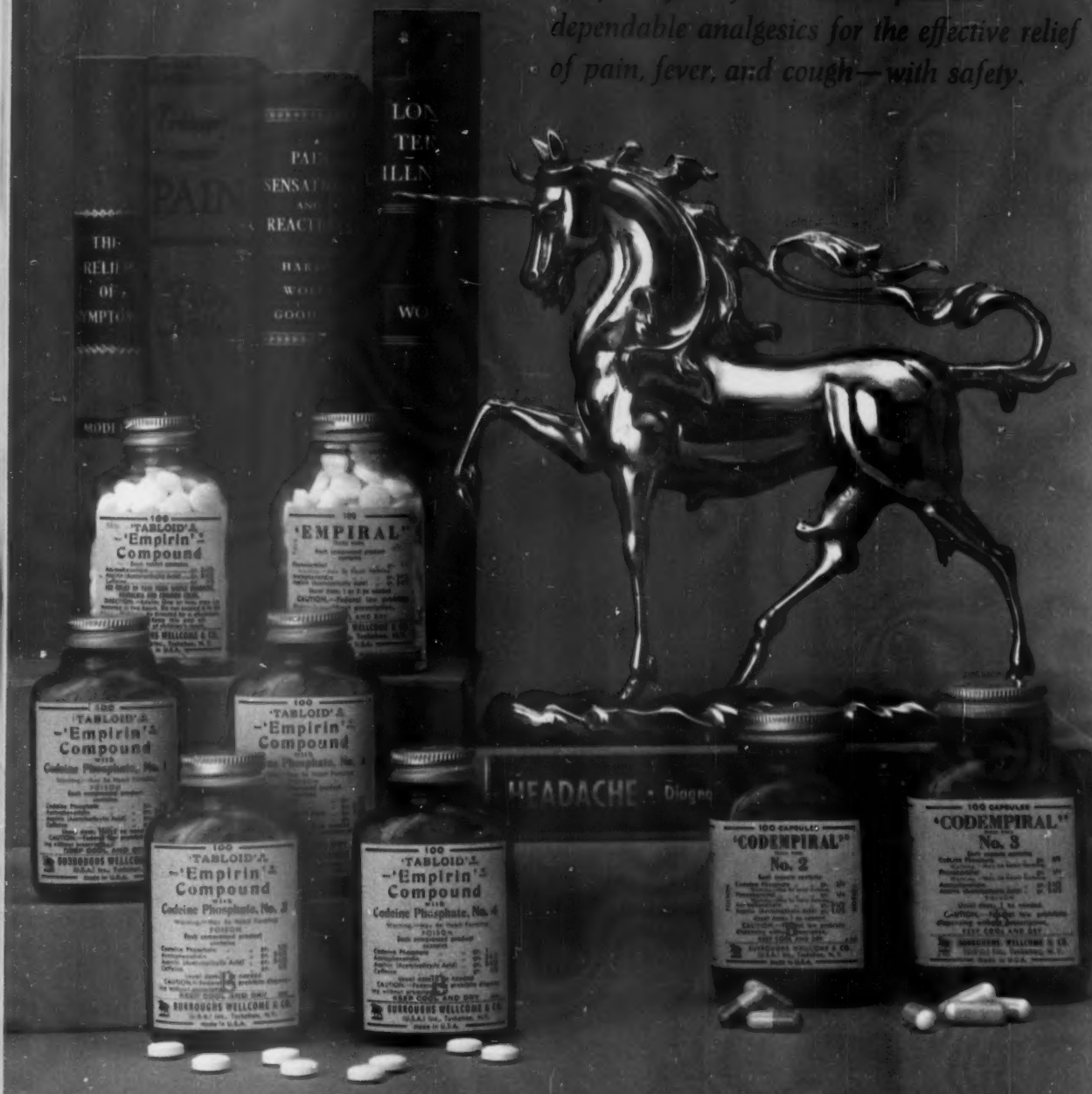

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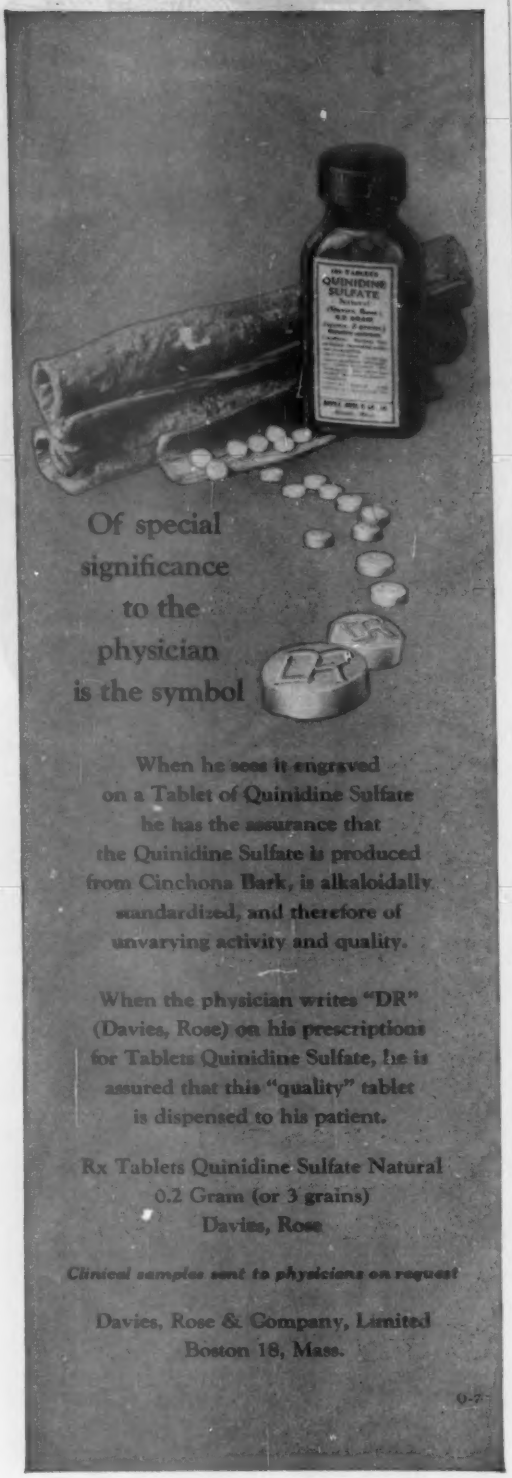
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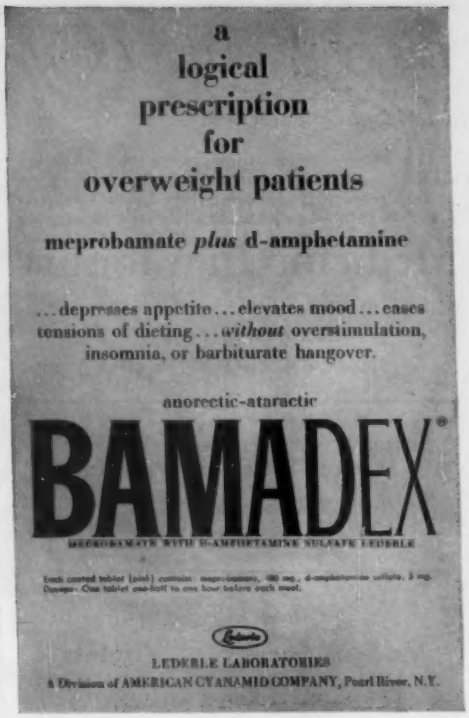

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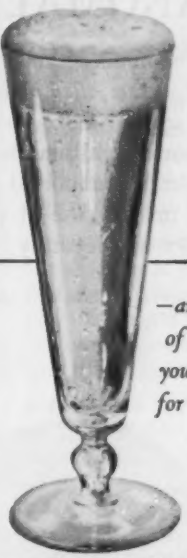

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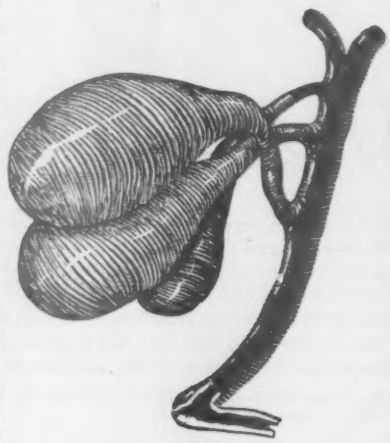
Source: Skilboe, B.: Am. J. Clin. Path. *30*:252, 1958.



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(1) Beckman, H.: Drugs: Their Nature, Action and Use, Philadelphia, W. B. Saunders Company, 1958, p. 425.
(2) Biliary Tract Diseases, M. Times *85*:1081, 1957.

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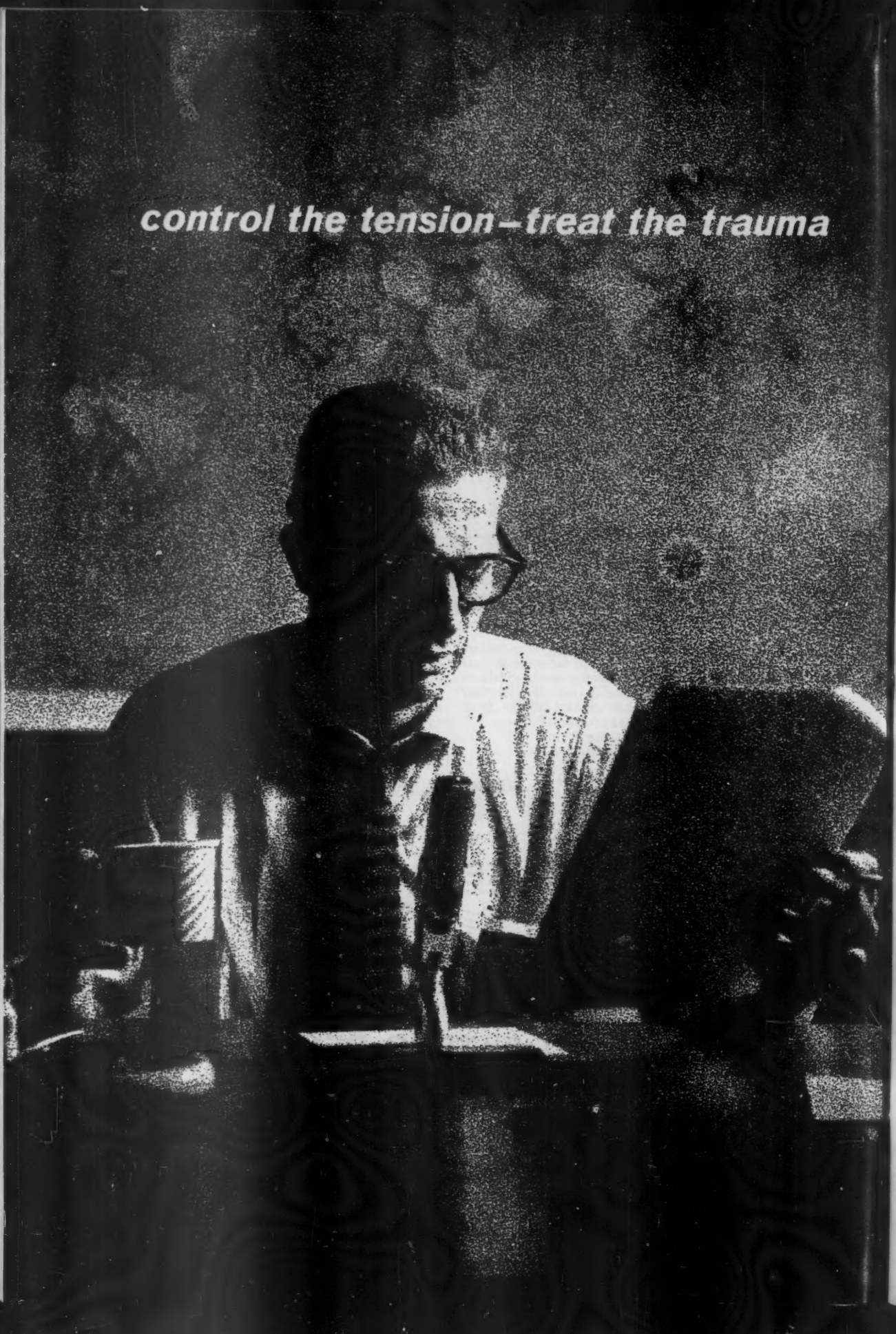
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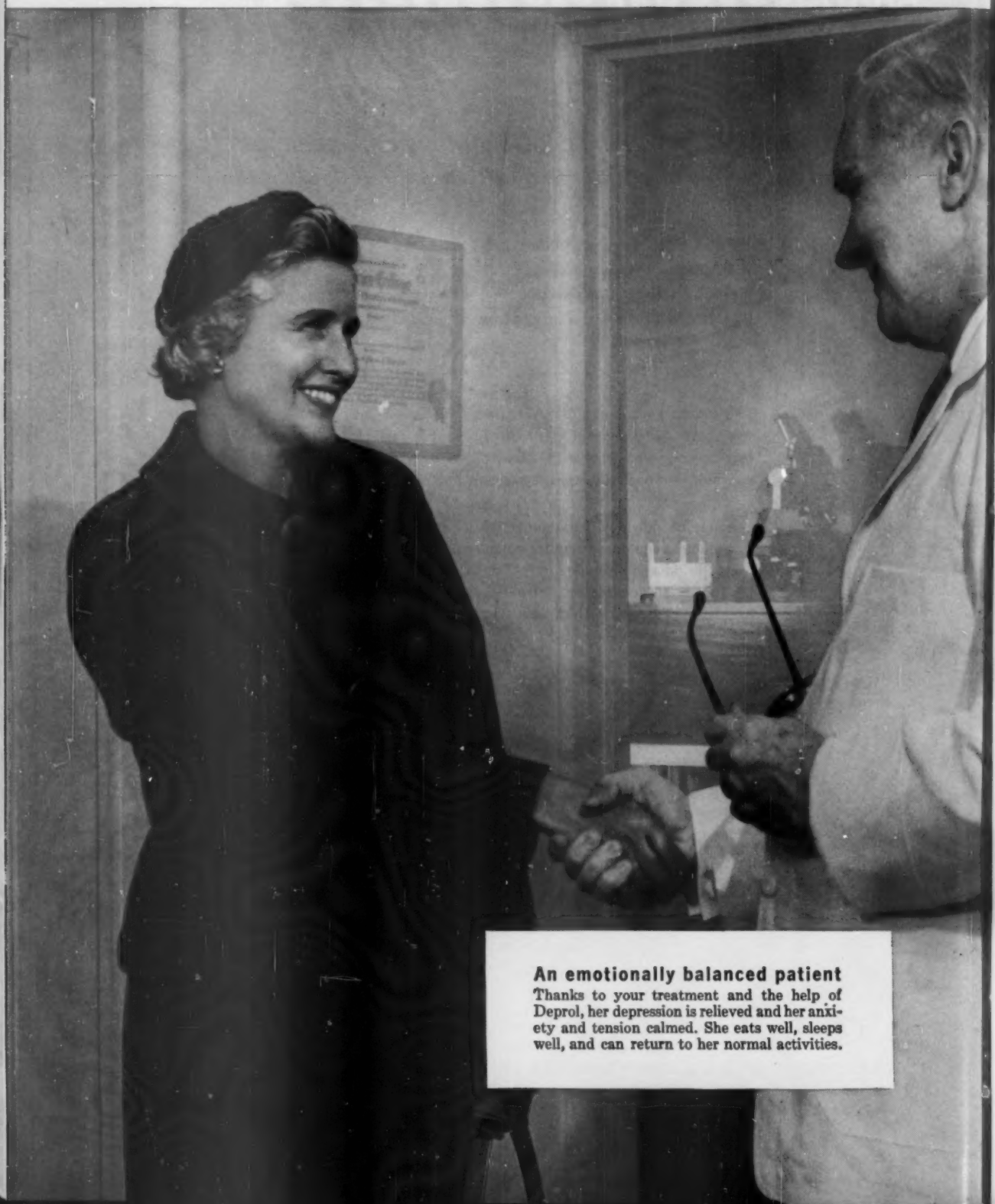

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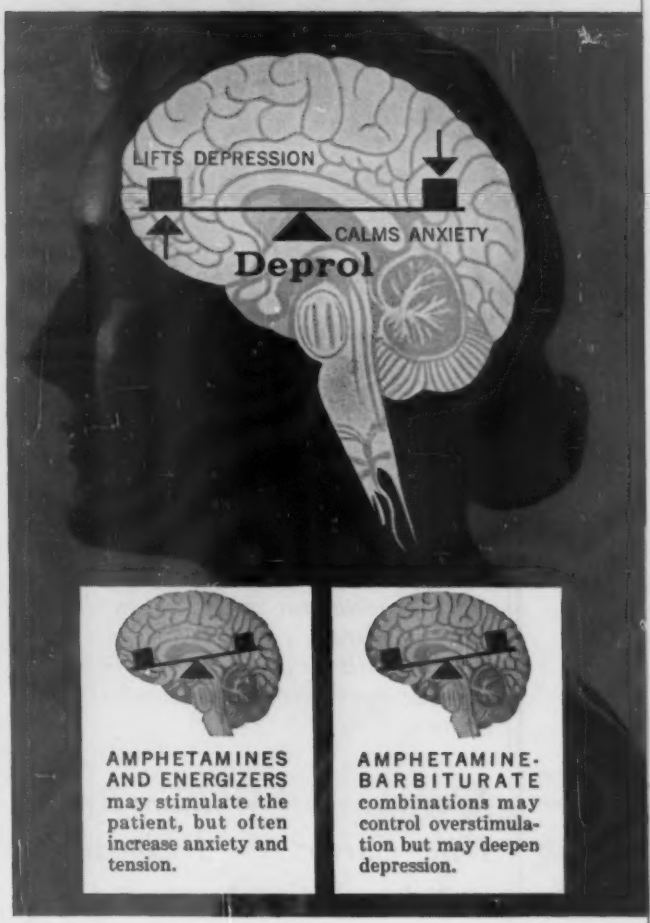
LIFTS DEPRESSION
CALMS ANXIETY
Deprol
AMPHETAMINES AND ENERGIZERS may stimulate the patient, but often increase anxiety and tension.
AMPHETAMINE-BARBITURATE combinations may control overstimulation but may deepen depression.

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DOSAGE: Usual starting dose is 1 tablet q.i.d. When necessary, this may be gradually increased up to 3 tablets q.i.d.

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(1) Beck, J. W.; Saavedra, D.; Antell, G. J., & Tejeiro, B.: Am. J. Trop. Med. 8:349, 1959.

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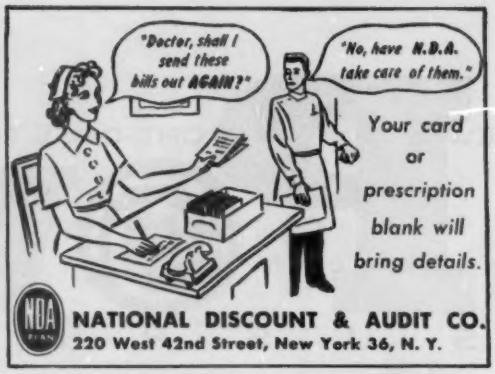

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